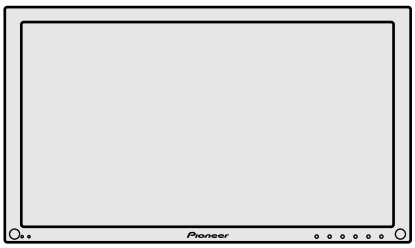
Pioneer sound.vision.soul

Service Manual



PDP-433PU

ORDER NO.
ARP3143

PLASMA DISPLAY

PDP-433PU
PDP-433PE
PDP-433PG

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-433PU	KUC	AC120V	
PDP-433PE	WYVI6	AC220-240V	
PDP-433PE	WYVI6XK	AC220-240V	
PDP-433PG	TLDPKBR	AC110-240V	

This service manual should be used together with the following manual(s).

This product is component of system.

Component	System			Service Manual	Remarks
Plasma Display System	PDP-4330HD	PDP-433HDE	PDP-433HDG	-	
• Media Receiver	PDP-R03U	-	-	ARP3113	
	-	PDP-R03E	-	ARP3148	
	-	-	PDP-R03G	ARP3149	
• Plasma Display	PDP-433PU	PDP-433PE	PDP-433PG	ARP3143	Service Manual

For details, refer to "Important symbols for good services".

Confirm it

Serial No.

○○**WYVI6** : □□**SS**######△△

○○**WYVI6XK** : □□**UK**######△△

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2003**

T-ZZV MAR. 2003 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

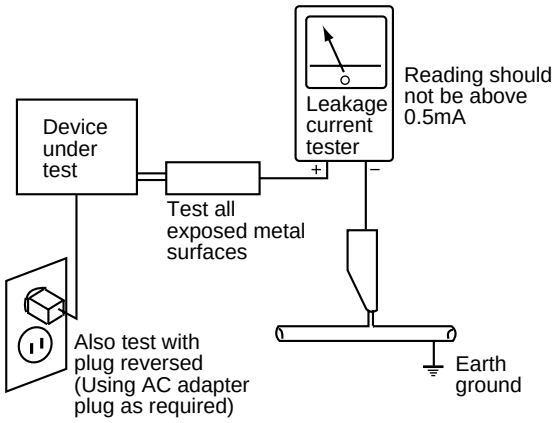
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

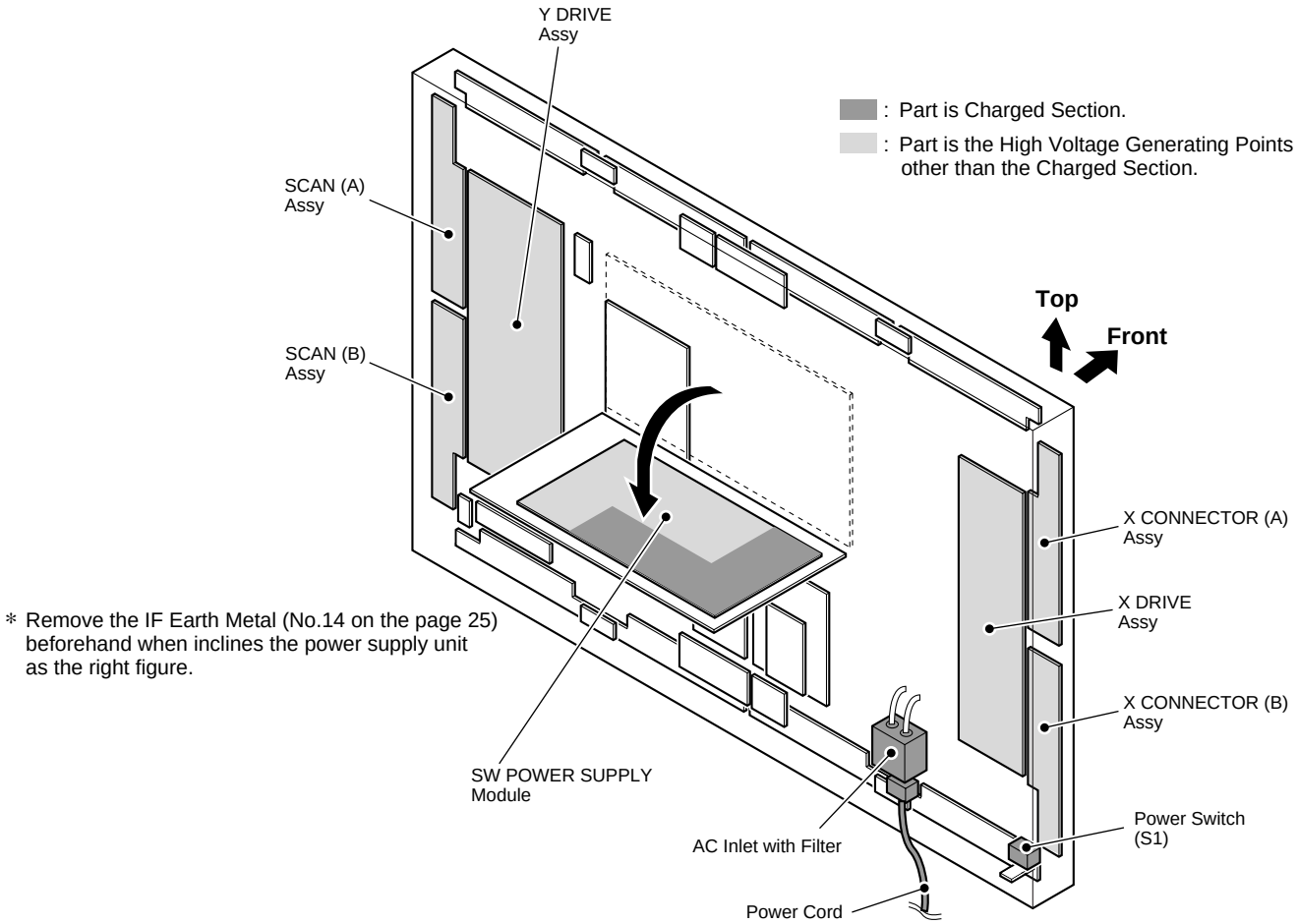
The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer (In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module ..... (215V)
2. X DRIVE Assy ..... (–280V to 215V)
3. Y DRIVE Assy .....(345V)
4. SCAN (A) Assy ..... (345V)
5. SCAN (B) Assy ..... (345V)
6. X CONNECTOR (A) Assy ..... (–280V to 215V)
7. X CONNECTOR (B) Assy ..... (–280V to 215V)



* Remove the IF Earth Metal (No.14 on the page 25) beforehand when inclines the power supply unit as the right figure.

Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

SAFETY INFORMATION 2
1. SPECIFICATIONS 7
2. EXPLODED VIEWS AND PARTS LIST 8
2.1 PACKING 8
2.2 UNDER LAYER SECTION (1) 10
2.3 UNDER LAYER SECTION (2) 12
2.4 UNDER LAYER SECTION (3) 14
2.5 UNDER LAYER SECTION (4) 16
2.6 UNDER LAYER SECTION (5) 18
2.7 MIDDLE LAYER SECTION (1) 20
2.8 MIDDLE LAYER SECTION (2) 22
2.9 UPPER LAYER SECTION (1) 24
2.10 UPPER LAYER SECTION (2) 26
2.11 FRONT CASE SECTION 28
2.12 REAR SECTION 30
2.13 PDP SERVICE ASSY 433 (AWU1069) 31
2.14 PANEL CHASSIS (43) ASSY (AWU1067) 32
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM 34
3.1 BLOCK DIAGRAM 34
3.1.1 OVERALL DIAGRAM 34
3.1.2 MR INTERFACE ASSY 36
3.1.3 DIGITAL VIDEO ASSY 38
3.1.4 X DRIVE ASSY 39
3.1.5 Y DRIVE ASSY 40
3.1.6 SUB ADDRESS A and B ASSYS 42
3.1.7 ADR RESONANCE ASSY 43
3.1.8 ADR CONNECT A, B, C and D ASSYS 44
3.1.9 AUDIO AMP and SP TERMINAL ASSYS 45
3.2 WAVEFORMS 46
(For SCHEMATIC DIAGRAM, refer to ARP3144)
4. PCB CONNECTION DIAGRAM ..... Refer to ARP3144
5. PCB PARTS LIST 50
6. ADJUSTMENT 60
6.1 SERVICE FACTORY MODE 60
6.1.1 How to Enter the Service Factory Mode 61
6.1.2 General Information about the Plasma Display and Media Receiver 62
6.1.3 Adjustment and Setting Item of the Plasma Display 64
6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED 67
6.3 ADJUSTMENT 68
6.4 COMMANDS 71
6.4.1 RS-232C Commands 71
6.4.2 GET Commands 75
7. GENERAL INFORMATION 77
7.1 DIAGNOSIS 77
7.1.1 CONFIGRATION OF THE PC BOARD 77
7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN DIAGNOSIS BY LED 78
7.1.3 DISASSEMBLY 85
7.2 IC INFORMATION 89
8. PANEL FACILITIES 108

1. SPECIFICATIONS

Item	Model: PDP-433PU
Number of Pixels	1024 × 768 pixels
Audio Amplifier	12 W + 12 W (10% distortion)
Power Requirement	AC 120 V, 60 Hz, 318 W (0.6 W Standby)
Dimensions	1070 (W) × 630 (H) × 98 (D) mm [42 1/8 (W) × 24 13/16 (H) × 3 7/8 (D) inch]
Weight	31.5 kg (69.4 lbs)
Accessories	Power Cord, Cleaning Cloth, Three speed clamps, Three bead bands, Warranty card

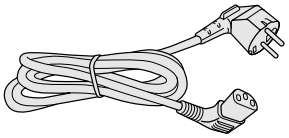
Item	Model: PDP-433PE	Model: PDP-433PG
Number of Pixels	1024 x 768 pixels	1024 x 768 pixels
Audio Amplifier	12 W + 12 W (10 % distortion)	12 W + 12 W (10 % distortion)
Power Requirement	AC 220–240 V, 50/60 Hz, 320 W (0.6 W Standby)	AC 110–240 V, 50/60 Hz, 319 W (0.8 W Standby)
Dimensions	1070 (W), 630 (H), 98 (D) mm	1070 (W), 630 (H), 98 (D) mm
Weight	31.5 kg	31.5 kg
Accessories	Power Cord, Cleaning Cloth, Three speed clamps, Three bead bands, Warranty card	Cleaning Cloth, Three speed clamps, Three bead bands,

• Design and specifications are subject to change without notice.

• Accessories

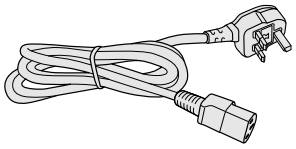
Power cord

(ADG1173) ⚠



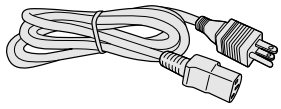
(For Europe, except U.K. and Eire)

(ADG1193) ⚠



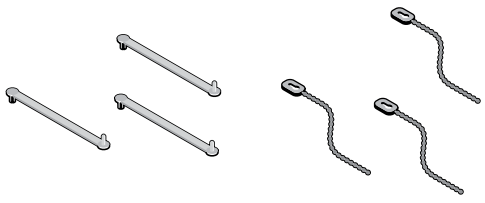
(For U.K., and Eire)

(ADG1208) ⚠

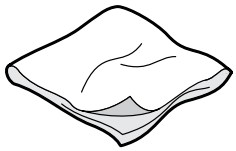


(For North America)

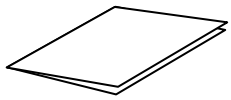
Binder Assy (AEC1908)



Three speed clamps Three bead bands



Cleaning cloth (AED1208)

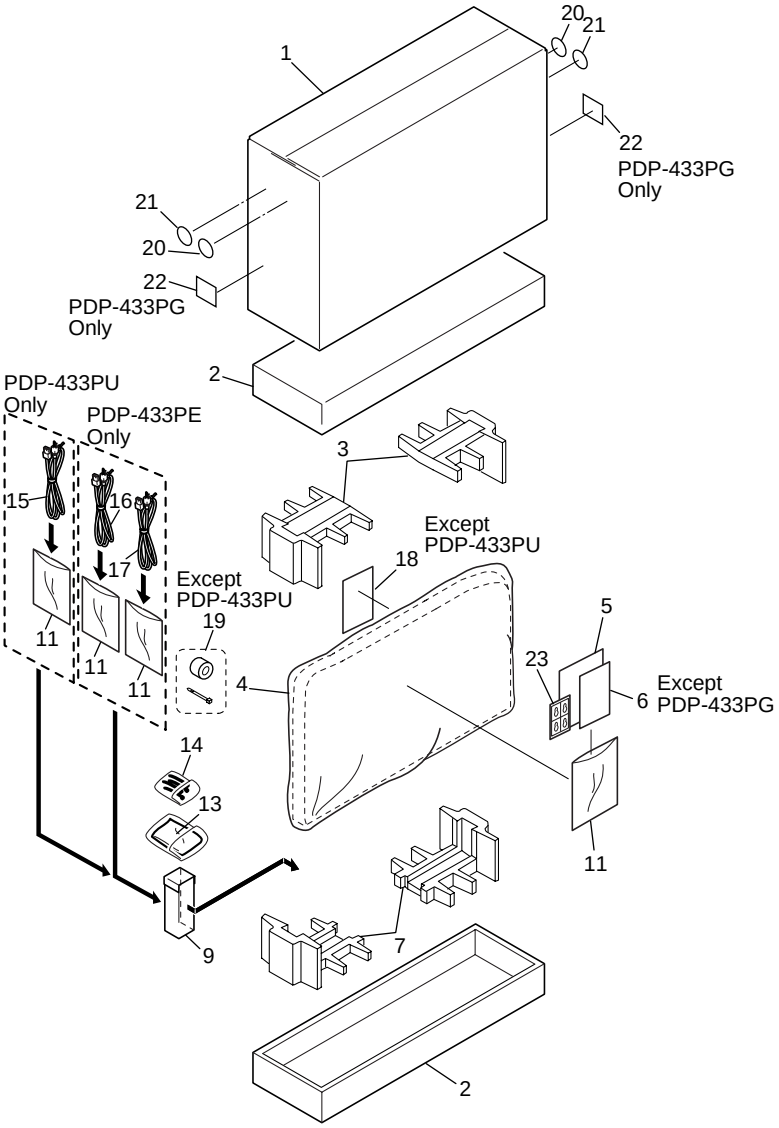


Warranty card

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING parts List

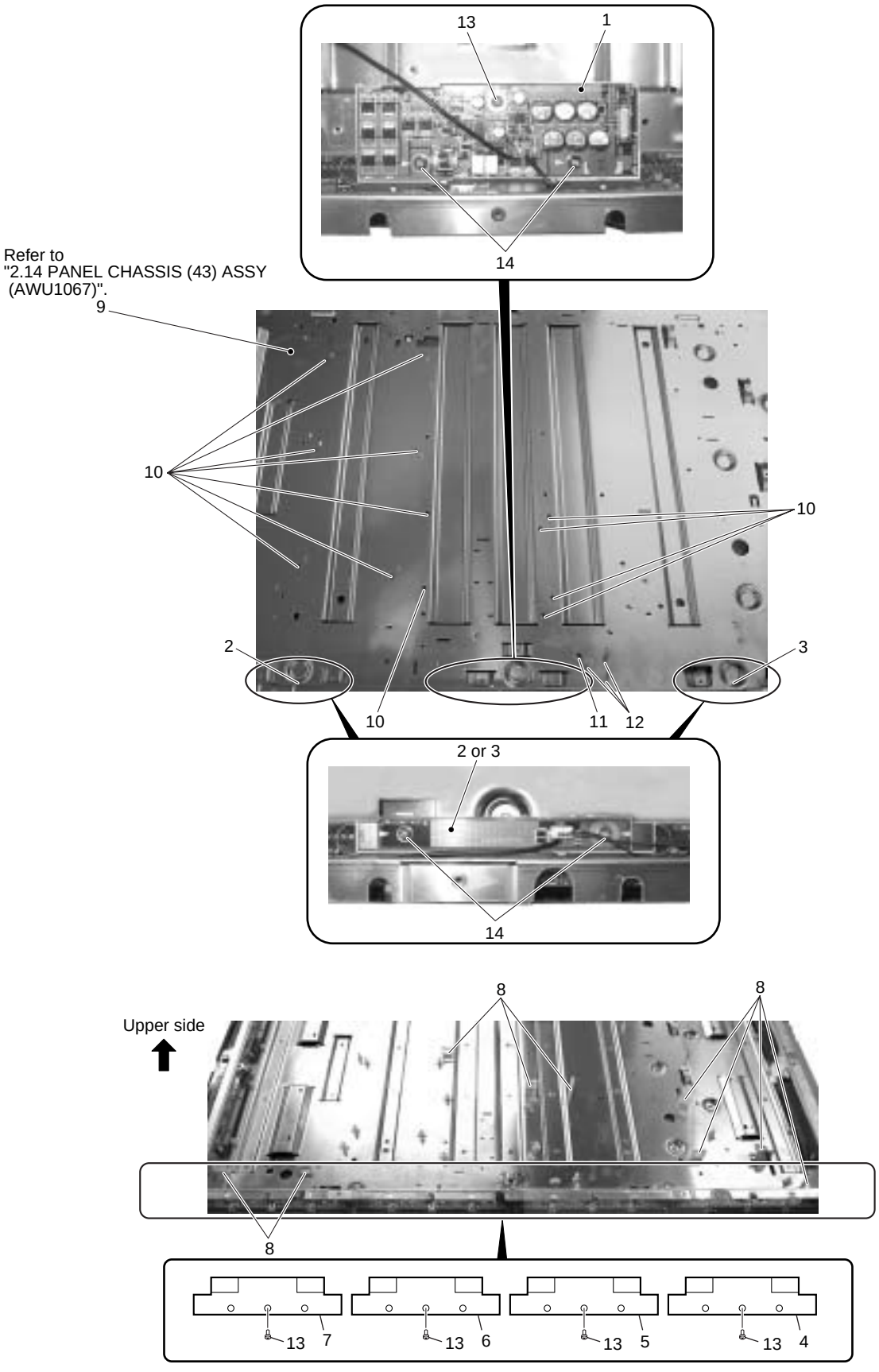
Mark	No.	Description	Part No.
	1	Packing Case(43)	See Contrast table (2)
	2	Carton(43)	AHD3100
	3	Pad(43U)	AHA2282
	4	Mirror Mat	AHG1284
	5	SP Caution Sheet	ARM1218
NSP	6	Warranty Card	See Contrast table (2)
	7	Pad(43L)	AHA2283
	8	• • • • •	
	9	Power Cord Case	See Contrast table (2)
	10	• • • • •	
	11	Vinyl Bag	AHG1310
	12	• • • • •	
	13	Wiping Cloth	AED1208
	14	Binder Assy (Speed Clampx3, Bead Bandx3)	AEC1908
⚠	15	Power Cord	See Contrast table (2)
⚠	16	Power Cord	See Contrast table (2)
⚠	17	Power Cord	See Contrast table (2)
	18	Caution Sheet	See Contrast table (2)
	19	Ferrite Core	See Contrast table (2)
	20	Label (Blue 16)	AAX2787
	21	Label (Green 16)	AAX2956
	22	MIC Label	See Contrast table (2)
	23	SP Spacer	AEC1925

(2) CONTRAST TABLE

PDP-433PU/KUC, PDP-433PE/WYVI6, PDP-433PE/WYVI6XK and PDP-433PG/TLDPKBR are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-433PU/KUC	PDP-433PE/ WYVI6	PDP-433PE/ WYVI6XK	PDP-433PG/ TLDPKBR
	1	Packing Case(43)	AHD3115	AHD3114	AHD3138	AHD3116
NSP	6	Warranty Card	ARY1112	ARY1114	ARY1114	Not used
	9	Power Cord Case	AHC1037	AHC1037	AHC1039	AHC1037
⚠	15	Power Cord	ADG1208	Not used	Not used	Not used
⚠	16	Power Cord	Not used	ADG1173	ADG1173	Not used
⚠	17	Power Cord	Not used	ADG1193	ADG1193	Not used
	18	Caution Sheet	Not used	ARM1213	ARM1213	ARM1213
	19	Ferrite Core	Not used	ATX1039	ATX1039	ATX1039
	22	MIC Label	Not used	Not used	Not used	AAX2951

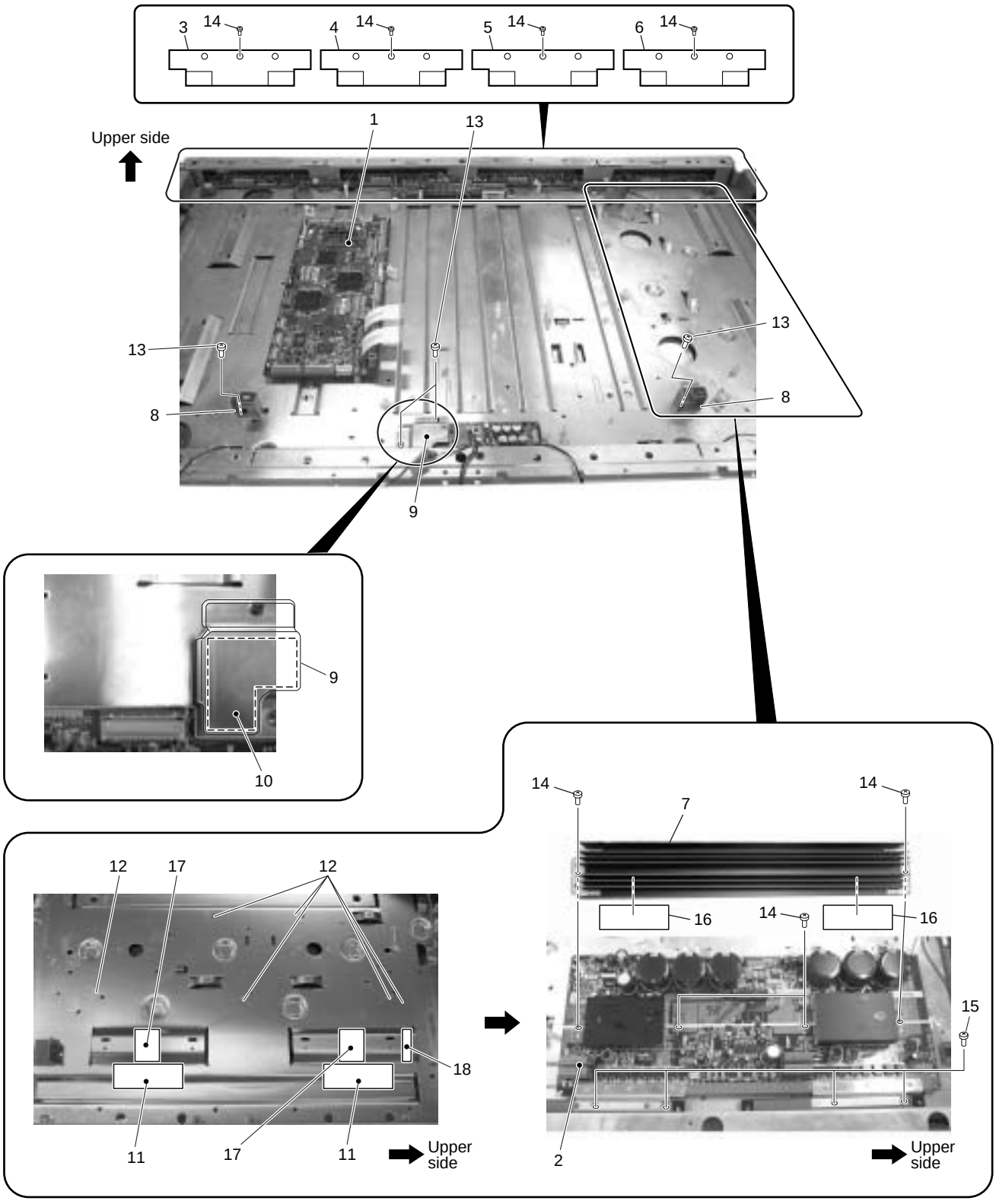
2.2 UNDER LAYER SECTION (1)



UNDER LAYER SECTION(1) parts List

Mark	No.	Description	Part No.
	1	ADR RESONANCE Assy	AWZ6751
	2	BRIDGE C Assy	AWZ6730
	3	BRIDGE D Assy	AWZ6731
NSP	4	ADR CONNECT A Assy	AWZ6678
NSP	5	ADR CONNECT B Assy	AWZ6679
NSP	6	ADR CONNECT C Assy	AWZ6680
NSP	7	ADR CONNECT D Assy	AWZ6681
	8	Wire Saddle	AEC1904
NSP	9	Panel Chassis (43) Assy	AWU1067
	10	Circuit Board Spacer	AEC1872
NSP	11	PCB Spacer	AEC1121
	12	Circuit Board Spacer	AEC1873
	13	Screw	VBB30P100FNI
	14	Screw	ABA1301

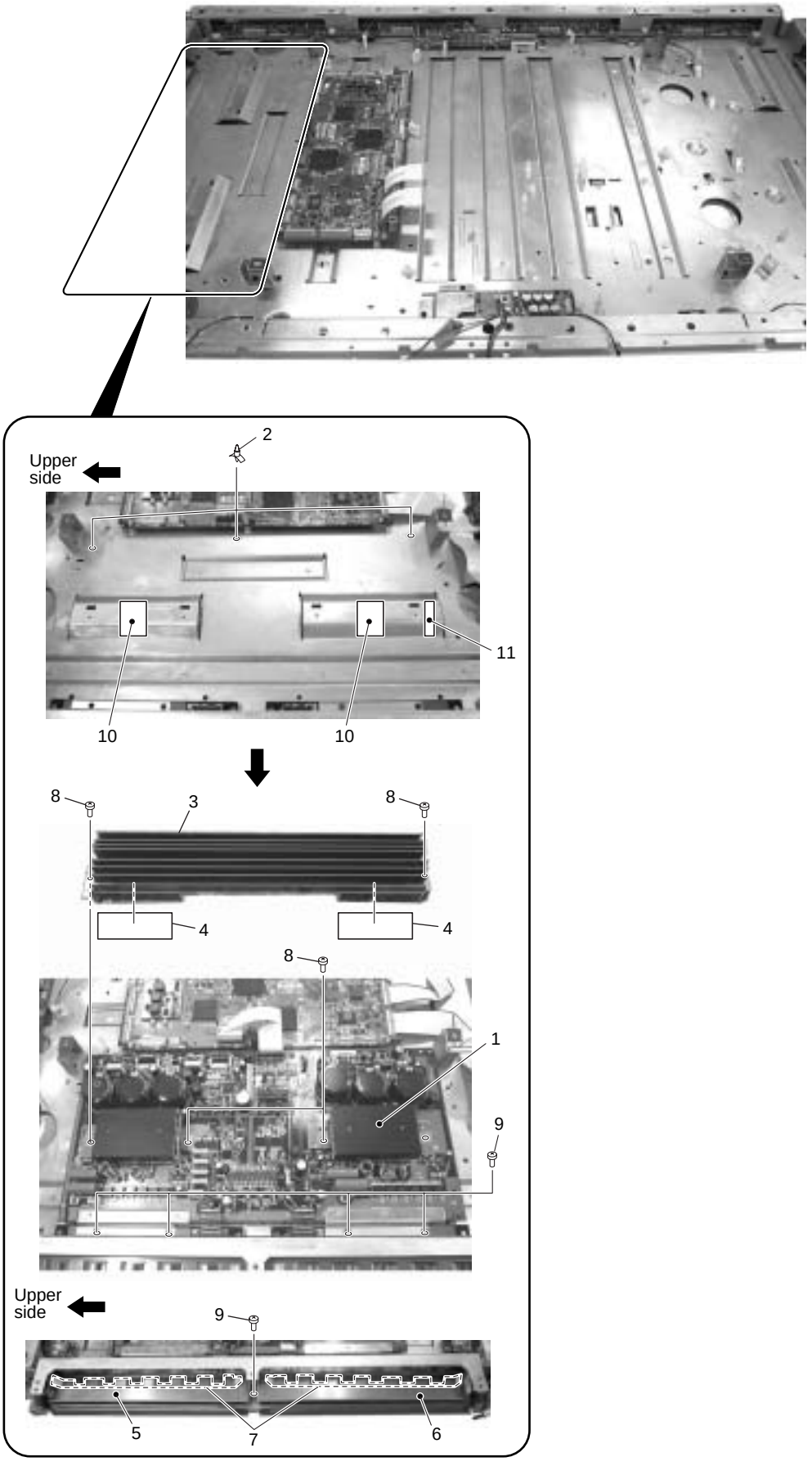
2.3 UNDER LAYER SECTION (2)



UNDER LAYER SECTION(2) parts List

Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1971
	2	X DRIVE Assy	AWV1985
NSP	3	ADR CONNECT A Assy	AWZ6678
NSP	4	ADR CONNECT B Assy	AWZ6679
NSP	5	ADR CONNECT C Assy	AWZ6680
NSP	6	ADR CONNECT D ASSY	AWZ6681
NSP	7	Drive Heatsink Assy	ANH1598
NSP	8	Metal Fitting	ANG2464
NSP	9	Heat Sink	ANH1594
	10	Silicone Sheet	AEH1039
	11	Coil Silicon Sheet	AEH1048
	12	Circuit Board Spacer	AEC1872
	13	Screw	ABZ30P060FMC
	14	Screw	VBB30P100FNI
	15	Screw	PMB30P060FNI
	16	Drive Silicon Sheet	AEH1041
	17	Insulation Sheet A	AEC1923
	18	Insulation Sheet B	AEC1924

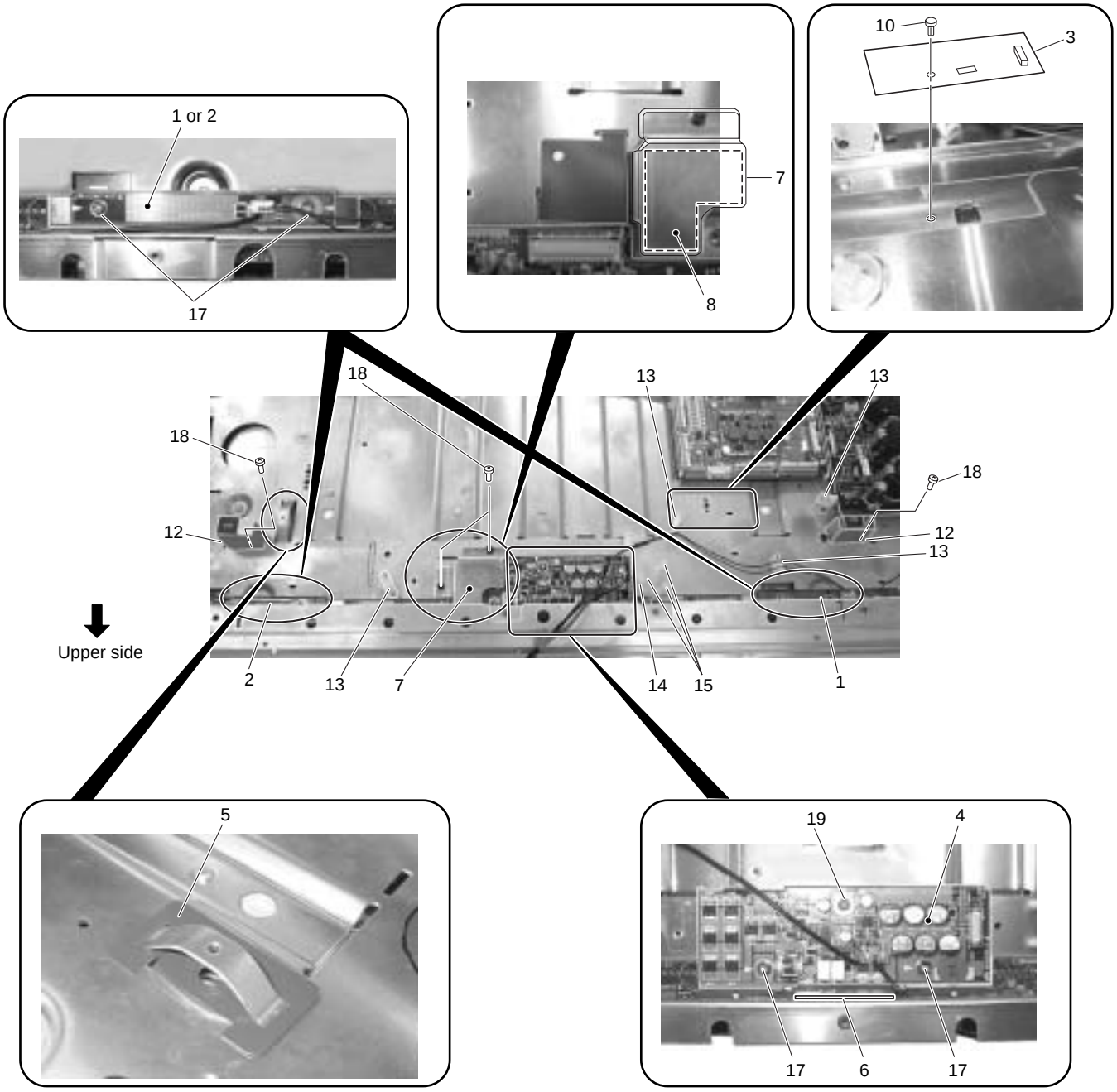
2.4 UNDER LAYER SECTION (3)



UNDER LAYER SECTION(3) parts List

Mark	No.	Description	Part No.
	1	Y DRIVE Assy	AWZ6749
	2	Circuit Board Spacer	AEC1872
NSP	3	Drive Heatsink Assy	ANH1598
	4	Drive Silicon Sheet	AEH1041
	5	Scan IC Spring (43L)	ABK1029
	6	Scan IC Spring (43R)	ABK1030
	7	Scan Insulation Sheet (43)	AMR3287
	8	Screw	VBB30P100FNI
	9	Screw	PMB30P060FNI
	10	Insulation Sheet A	AEC1923
	11	Insulation Sheet B	AEC1924

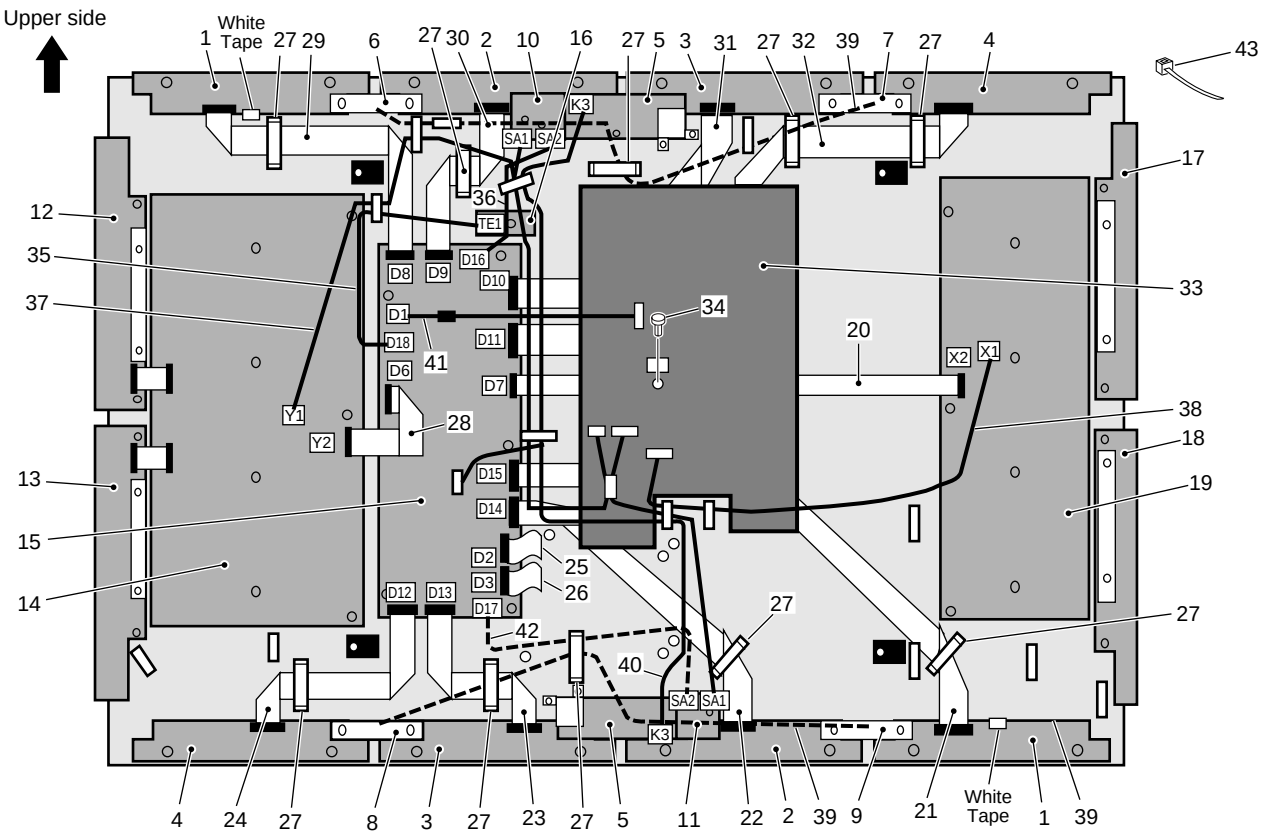
2.5 UNDER LAYER SECTION (4)



UNDER LAYER SECTION(4) parts List

Mark	No.	Description	Part No.
	1	BRIDGE A Assy	AWZ6728
	2	BRIDGE B Assy	AWZ6729
	3	SENSOR ASSY	AWZ6696
	4	ADR RESONANCE Assy	AWZ6751
	5	Brind Plate	AMR3313
	6	Insulation Sheet	AMR3343
NSP	7	Heat Sink	ANH1594
	8	Silicone Sheet	AEH1039
	9	• • • • •	
	10	Rivet	BEC1066
	11	• • • • •	
	12	Metal Fitting	ANG2464
	13	Wire Saddle	AEC1904
NSP	14	PCB Spacer	AEC1121
	15	Circuit Board Spacer	AEC1873
	16	• • • • •	
	17	Screw	ABA1301
	18	Screw	ABZ30P060FMC
	19	Screw	VBB30P100FNI

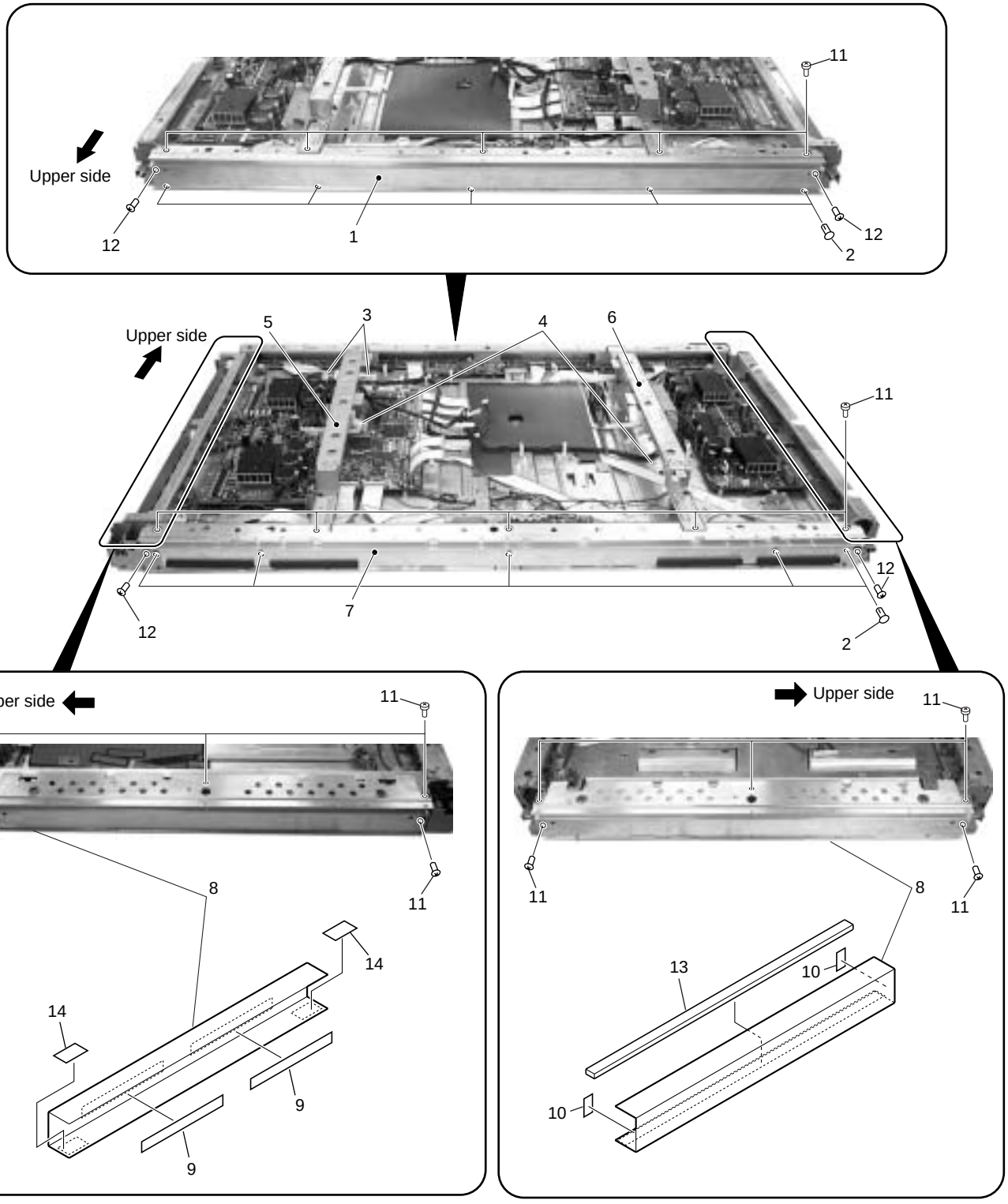
2.6 UNDER LAYER SECTION (5)



UNDER LAYER SECTION(5) parts List

Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678
NSP	2	ADR CONNECT B Assy	AWZ6679
NSP	3	ADR CONNECT C Assy	AWZ6680
NSP	4	ADR CONNECT D Assy	AWZ6681
	5	ADR RESONANCE Assy	AWZ6751
	6	BRIDGE A Assy	AWZ6728
	7	BRIDGE B Assy	AWZ6729
	8	BRIDGE C Assy	AWZ6730
	9	BRIDGE D Assy	AWZ6731
	10	SUB ADDRESS A Assy	AWZ6692
	11	SUB ADDRESS B Assy	AWZ6693
	12	SCAN (A) Assy	AWZ6724
	13	SCAN (B) Assy	AWZ6725
	14	Y DRIVE Assy	AWZ6749
	15	DIGITAL VIDEO Assy	AWV1971
	16	SENSOR Assy	AWZ6696
	17	X CONNECTOR (A) Assy	AWZ6726
	18	X CONNECTOR (B) Assy	AWZ6727
	19	X DRIVE Assy	AWV1985
	20	J204 Flexible Flat Cable	ADD1207
	21	J209 Flexible Flat Cable	ADD1206
	22	J210 Flexible Flat Cable	ADD1204
	23	J211 Flexible Flat Cable	ADD1199
	24	J212 Flexible Flat Cable	ADD1201
	25	J201 Flexible Flat Cable	ADD1194
	26	J202 Flexible Flat Cable	ADD1194
	27	Flat Clamp	AEC1879
	28	J203 Flexible Flat Cable	ADD1198
	29	J205 Flexible Flat Cable	ADD1202
	30	J206 Flexible Flat Cable	ADD1200
	31	J207 Flexible Flat Cable	ADD1208
	32	J208 Flexible Flat Cable	ADD1205
	33	Power Sheet (43)	AMR3284
	34	Rivet	BEC1066
	35	J110 3P Housing Wire	ADX2741
	36	J108 8P Housing Wire	ADX2740
	37	J102 Wire E	ADX2738
	38	J103 13P Housing Wire	ADX2766
	39	J116,J117 4P Housing Wire	ADX2783
	40	J120 Wire L	ADX2763
	41	J101 13P Housing Wire	ADX2768
	42	J109 8P Housing Wire	ADX2743
	43	Nylon Binder	AEC-093

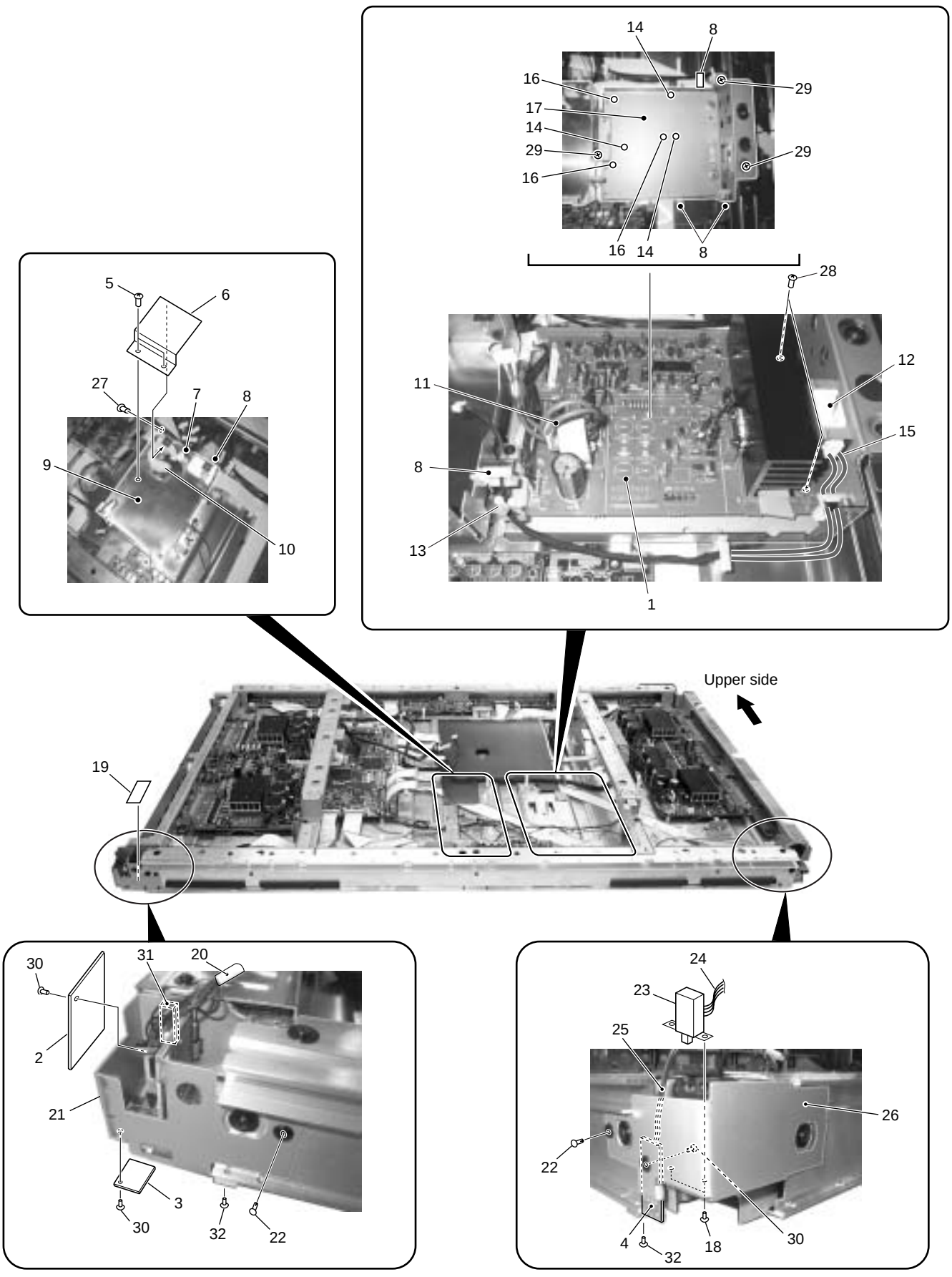
2.7 MIDDLE LAYER SECTION (1)



MIDDLE LAYER SECTION(1) parts List

Mark	No.	Description	Part No.
NSP	1	Front Chassis HU (43)	ANA1698
NSP	2	Card Spacer	AEC1902
	3	Niplocker	AEC1803
	4	Card Corner Holder	BEC1144
	5	Sub Frame L	ANG2517
	6	Sub Frame R	ANG2518
NSP	7	Front Chassis HL (43)	ANA1699
NSP	8	Front Chassis V (43)	ANA1702
	9	FPC Cushion (43)	AEB1371
	10	Insulation Sheet C	AEC1927
	11	Screw	ABA1294
	12	Screw	BMZ30P060FMC
	13	VR Cushion	AEB1374
	14	V Cushion	AED1205

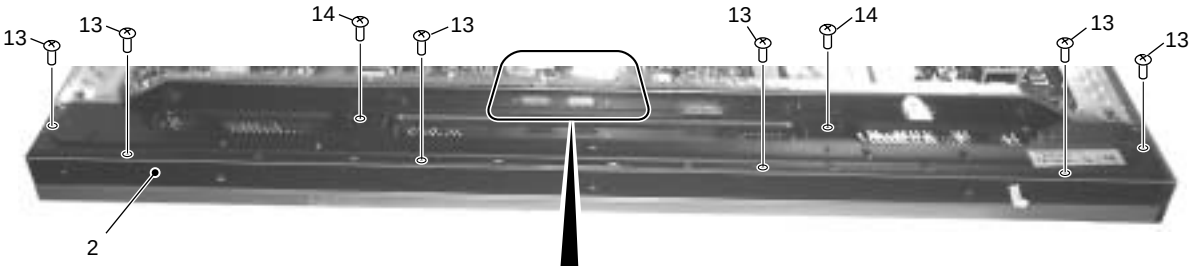
2.8 MIDDLE LAYER SECTION (2)

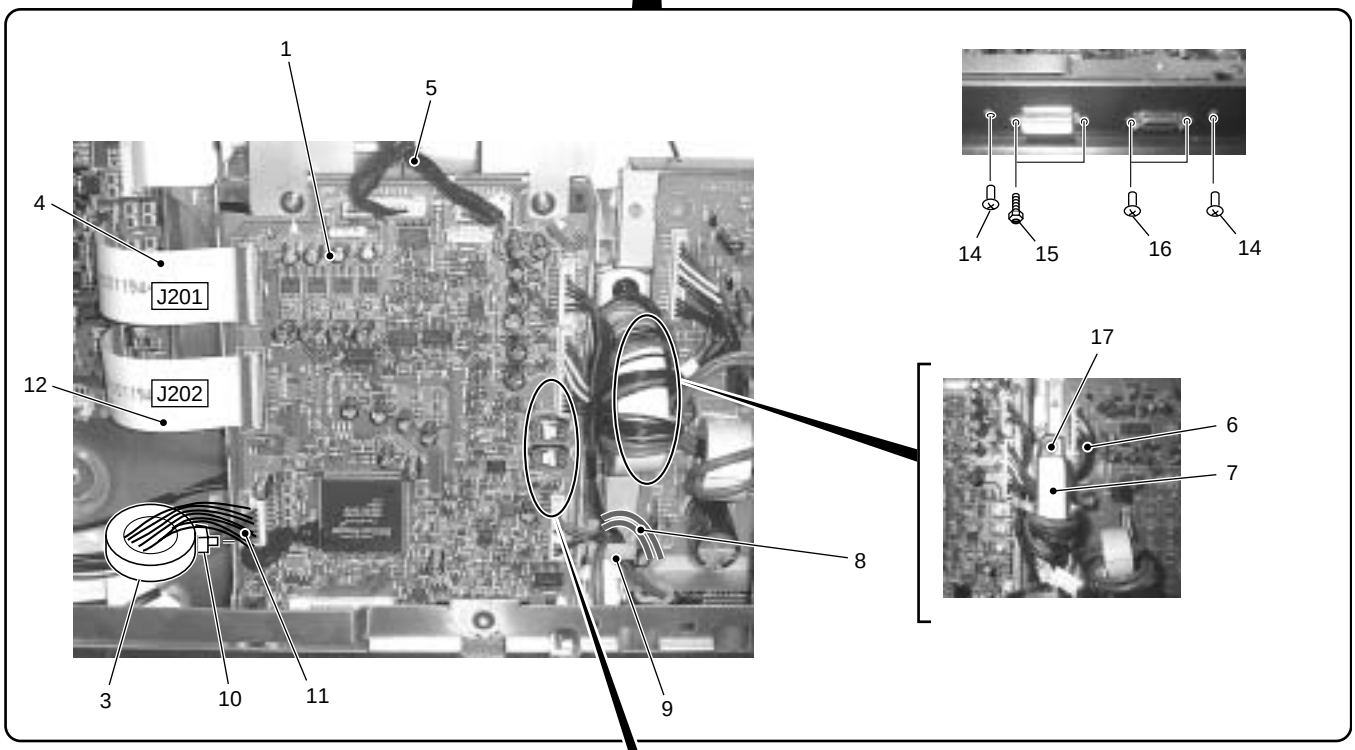


MIDDLE LAYER SECTION(2) parts List

Mark	No.	Description	Part No.
	1	AUDIO AMP Assy	AWZ6687
	2	FRONT KEY CONN Assy	AWZ6657
	3	IR (P) Assy	AWZ6658
	4	LED Assy	AWZ6655
	5	Nylon Rivet	AEP-211
	6	IF Sheet	AMR3298
	7	Edge Saddle	AEC1571
	8	Wire Saddle	AEC1745
	9	IF Shield	ANA1675
	10	L2 Toroidal Core	ATX1042
	11	J214 3P Housing Wire	ADX2735
	12	S2 Power Switch	ASG1089
	13	Niplocker	BEC1136
	14	PCB Spacer	AEC1570
	15	J215 3P Housing Wire	ADX2757
	16	Spacer	AEC1360
	17	Audio Base	ANA1687
	18	Screw	BMZ30P060FZK
	19	V Cushion	AED1205
	20	J113 Wire PJ	ADX2742
NSP	21	IR Holder	ANG2494
	22	Nylon Rivet	AEC1671
⚠	23	S1 Power Switch	ASG1082
	24	J106 Wire PC	ADX2827
	25	J104 3P Housing Wire	ADX2748
NSP	26	Switch Holder	ANG2493
	27	Screw	ABA1294
	28	Screw	PMB30P060FNI
	29	Screw	AMZ30P060FZK
	30	Screw	BMZ30P040FMC
	31	Gasket R	ANK1695
	32	Screw	ABZ30P050FZK

2.9 UPPER LAYER SECTION (1)



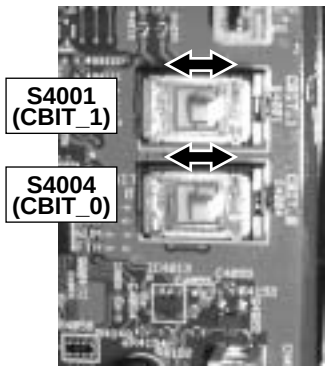


■ Caution in the MR INTERFACE Assy Replacement

Set the slide switches in accordance with applicable model when replacing the MR INTERFACE Assy.

	S4001 CBIT_1	**S4004** CBIT_0
PDP-433P	→	→
PDP-433PU	→	→
PDP-433PE	←	→
PDP-433PG	←	→

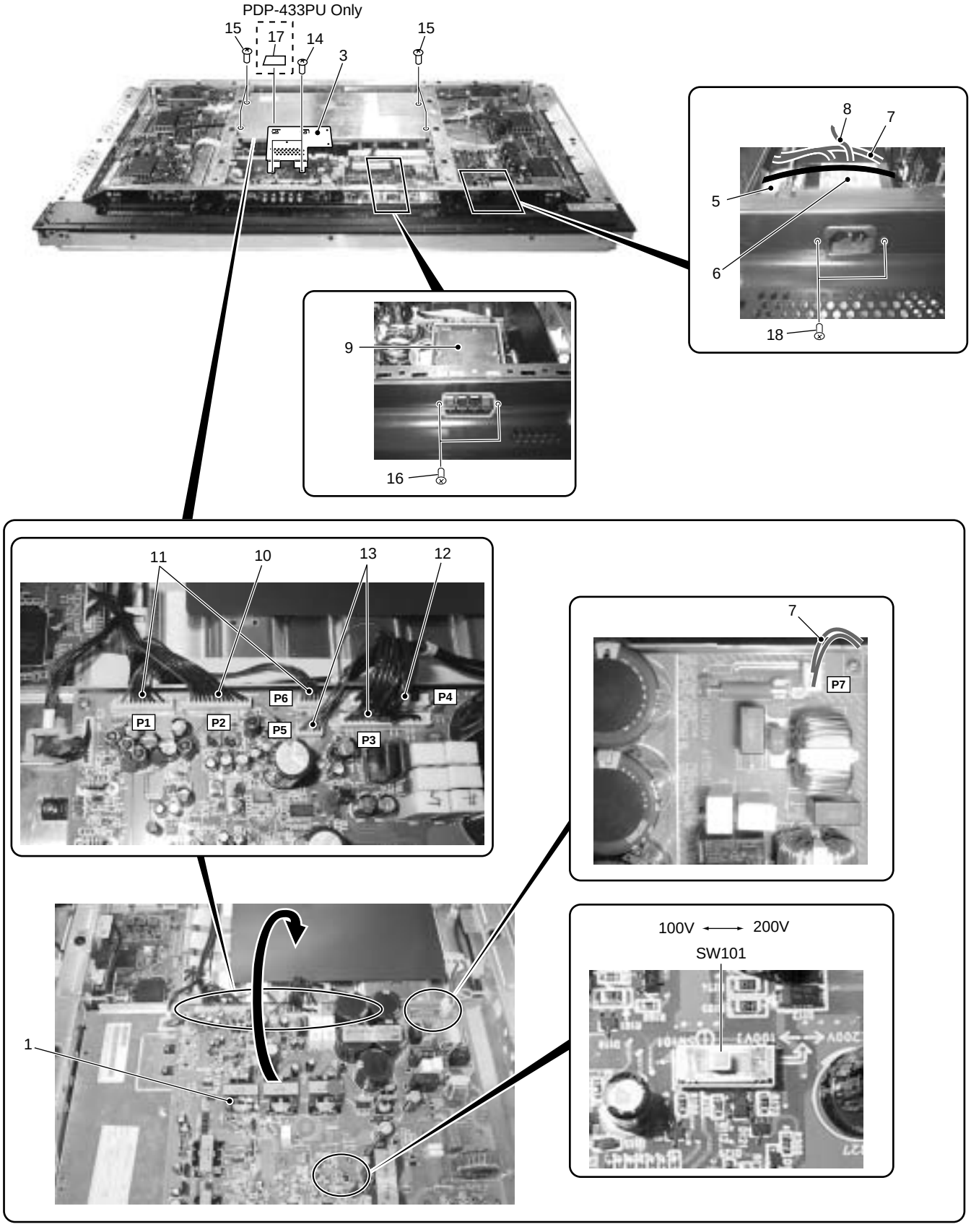
Note 1 : When there is not S4004, set only S4001.
Note 2 : When there are not S4001 and S4004, setting is unnecessary.



UPPER LAYER SECTION(1) parts List

Mark No.	Description	Part No.
1	MR INTERFACE Assy	AWZ6699
2	Terminal Panel	ANG2534
3	L6 Ferrite Core	ATX1037
4	J201 Flexible Flat Cable	ADD1194
5	J118 Wire P	ADX2765
6	J111 14P Housing Wire	ADX2730
7	L3 Toroidal Core	ATX1042
8	J214 3P Housing Wire	ADX2735
9	J104 3P Housing Wire	ADX2748
10	Ferrite Core Holder	AEC1818
11	J113 Wire PJ	ADX2742
12	J202 Flexible Flat Cable	ADD1194
13	Screw	TBZ40P080FZK
14	Screw	AMZ30P060FZK
15	Screw	BBA1051
16	Screw	PMZ26P080FZK
17	Screw	ABA1294

2.10 UPPER LAYER SECTION (2)



UPPER LAYER SECTION(2) parts List

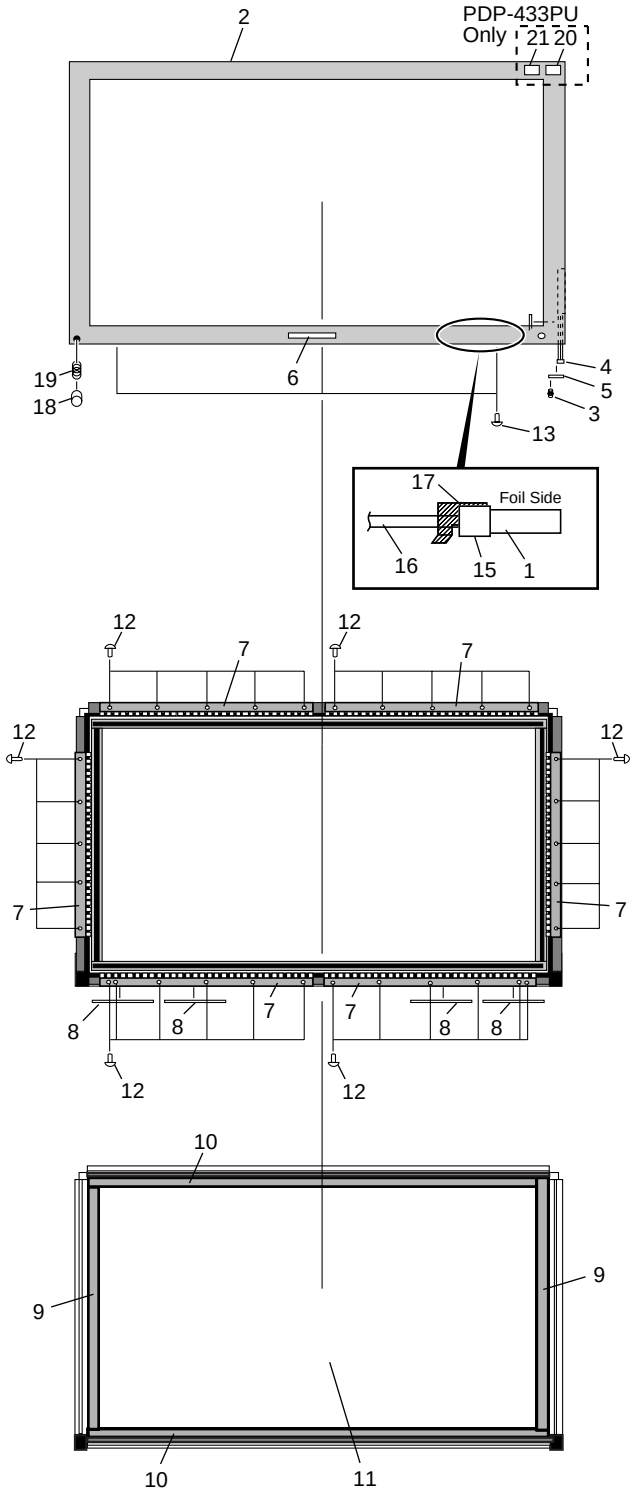
Mark	No.	Description	Part No.
⚠	1	SW Power Supply Module	AXY1059
	2	• • • • •	
	3	IF Earth Metal	ANA1690
	4	• • • • •	
⚠	5	L1 Ferrite Core	ATX1032
⚠	6	CN1 AC Inlet with Filter	AKP1223
	7	J105 Wire PB	ADX2826
	8	J114 Earth Wire	ADX2709
	9	SP TERMINAL Assy	AWZ6688
	10	J101 13P Housing Wire	ADX2768
	11	J118 Wire P	ADX2765
	12	J103 13P Housing Wire	ADX2766
	13	J102 Wire PE	ADX2738
	14	Screw	PMB30P060FNI
	15	Screw	AMZ30P060FZK
	16	Screw	BPZ30P080FZK
	17	Solder Warning Label	See Contrast table (2)
	18	Screw	BMZ30P060FZK

(2) CONTRAST TABLE

PDP-433PU/KUC, PDP-433PE/WYVI6, PDP-433PE/WYVI6XK and PDP-433PG/TLDPKBR are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-433PU/KUC	PDP-433PE/ WYVI6	PDP-433PE/ WYVI6XK	PDP-433PG/ TLDPKBR
	17	Solder Warning Label	AAX2644	Not used	Not used	Not used

2.11 FRONT CASE SECTION



FRONT CASE SECTION parts List

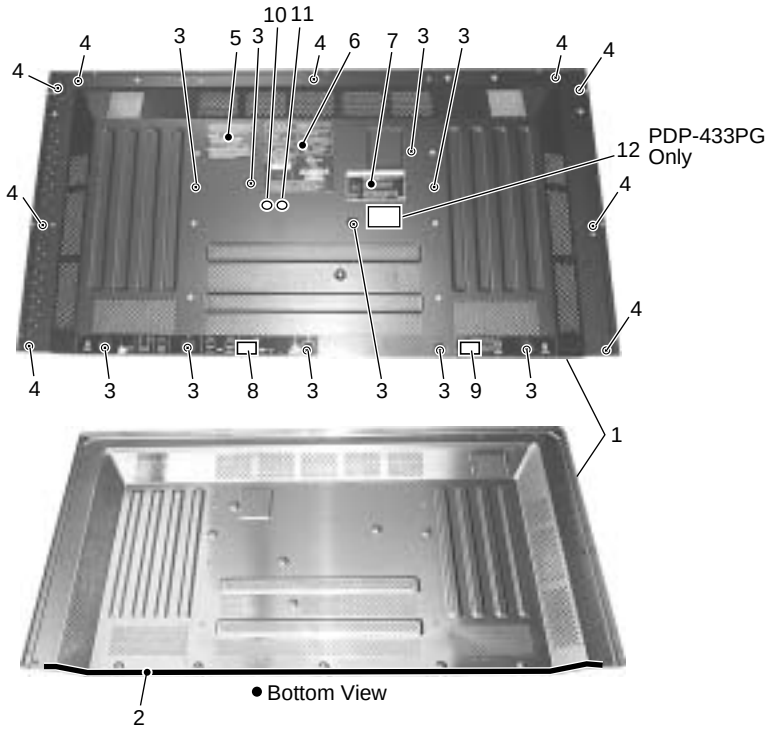
Mark	No.	Description	Part No.
	1	FRONT KEY Assy	AWZ6656
	2	Front Case 43 (P)	AMB2725
	3	Rivet	AEC1877
⚠	4	L5 Ferrite Core	ATX1043
	5	Lead Cover (P)	AMR3341
	6	Pioneer Badge	AAM1091
NSP	7	Panel Holder (43)	ANG2519
	8	Spacer	AEC1896
	9	Panel Cushion V (43)	AED1201
	10	Panel Cushion H (43)	AED1200
	11	Protect Panel Assy (43)	AMR3303
	12	Screw	ABZ30P050FZK
	13	Screw	VMZ30P060FZK
	14	• • • • •	
	15	Serial Seal	AAX2609
	16	J213 Flexible Flat Cable	ADD1193
NSP	17	Flexible Seal (P)	AEH1052
	18	Power Button	AAD4113
	19	Coil Spring	ABH1108
	20	Energy Star Label	See Contrast table (2)
	21	HDTV Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433PU/KUC, PDP-433PE/WYVI6, PDP-433PE/WYVI6XK and PDP-433PG/TLDPKBR are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-433PU/KUC	PDP-433PE/ WYVI6	PDP-433PE/ WYVI6XK	PDP-433PG/ TLDPKBR
	20	Energy Star Label	AAX2865	Not used	Not used	Not used
	21	HDTV Label	AAX2891	Not used	Not used	Not used

2.12 REAR SECTION



REAR SECTION parts List

Mark	No.	Description	Part No.
	1	Rear Case 43P	ANE1607
	2	Gasket L43	ANK1698
	3	Screw	AMZ30P060FZK
	4	Screw	TBZ40P080FZK
	5	Cleaning Label Gray	AAX2926
NSP	6	Name Label (HD) Gray	See Contrast table (2)
	7	Bolt Caution Label Gray	AAX2928
	8	Terminal Display Label P Gray	See Contrast table (2)
	9	Terminal Display Label L Gray	See Contrast table (2)
	10	Label (Blue 8)	AAX2786
	11	Label (Green 8)	AAX2955
	12	MIC Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433PU/KUC, PDP-433PE/WYVI6, PDP-433PE/WYVI6XK and PDP-433PG/TLDPKBR are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-433PU/KUC	PDP-433PE/ WYVI6	PDP-433PE/ WYVI6XK	PDP-433PG/ TLDPKBR
NSP	6	Name Label (HD) Gray	AAL2426	AAL2425	AAL2429	AAL2427
	8	Terminal Display Label P Gray	AAX2929	AAX2929	AAX2939	AAX2929
	9	Terminal Display Label L Gray	AAX2930	AAX2935	AAX2940	AAX2930
	12	MIC Label	Not used	Not used	Not used	AAX2949

2.13 PDP SERVICE ASSY 433 (AWU1069)

PDP SERVICE ASSY 433 parts List

Mark	No.	Description	Part No.
		Panel Chassis (43) Assy	AWU1067
NSP		Front Chassis V (43)	ANA1702
NSP		Front CHassis HU (43)	ANA1698
NSP		Front Chassis HL	ANA1700
		Sub Frame L	ANG2517
		Sub Frame R	ANG2518
		Scan IC Spring (43L)	ABK1029
		Scan IC Spring (43R)	ABK1030
NSP		Metal Fitting	ANG2464
		FPC Cushion 50	AEB1371
NSP		PCB Spacer	AEC1121
		Locking Card Spacer	AEC1736
		Circuit Board Spacer	AEC1872
		Circuit Board Spacer	AEC1873
		Spacer	AEC1896
NSP		Card Spacer	AEC1902
		Wire Saddle	AEC1904
		Panel Cushion H (43)	AED1200
		Panel Cushion V (43)	AED1201
		V Cushion	AED1205
		Insullation Sheet	AMR3263
		Scan Sheet (43)	AMR3287
		Card Corner Holder	BEC1144
		Insulation Sheet C	AEC1927
		Panel Caution Sheet	ARM1217
		Brind Plate	AMR3313
		Insulation Sheet	AMR3343
		Screw	ABA1283
		Screw	ABA1294
		Screw	ABZ30P060FMC
		Screw	BMZ30P060FMC
		Screw	PMB30P060FNI
		Screw	VBB30P100FNI
		Bolt	ABA1259
		Corner Pad	AHA2293
		Upper Carton	AHD3139
		Under Carton	AHD3140
		Packing Sheet	AHG1291
		Washer	WB80FZB
		VR Cushion	AEB1374
		Niplocker	AEC1803
		Static Plate	AHK1013
		Plate	AHK1014
		Screw	BYC40P220FMC
		Washer	WC60FZK

2.14 PANEL CHASSIS (43) ASSY (AWU1067)

PANEL CHASSIS(43) ASSY parts List

Mark	No.	Description	Part No.	
NSP		SCAN FUKUGO ASSY	AWV1969	*
NSP		ADDRESS FUKUGO ASSY	AWV1928	*
NSP		Address Module (IC1 - IC32)	AXF1114	
NSP		FPC (J1,J2)	ADY1079	
NSP		FPC (J3,J4)	ADY1080	
NSP		1..Chassis Assy (43)	ANA1712	
NSP		2..Chassis (43)	ANA1668	
NSP		2..Base Chassis (43)	ANA1669	
NSP		2..Scan Heatsink (43)	ANH1610	
NSP		2..Corner Angle A	ANG2457	
NSP		2..Corner Angle B	ANG2458	
		2..Insulation Seet A	AEC1923	
		2..Insulation Seet B	AEC1924	
NSP		2..Tube Cover	AMR3262	
		2..Rear Coner Label	AAX2862	
		2..Silicone Sheet 43	AEH1043	
		2..Adhesive Tape 43	AEH1044	
		2..Adhesive Tape B 43	AEH1054	
		2..Panel Silicone Sheet	AEH1055	
		2..Silicone Sheet B43	AEH1056	
		Pin Grommet	AEC1015	
		Scan Silicone Sheet	AEH1058	
NSP		Plasma Panel Assy (43)	AAV1239	
		Screw	VBB30P100FNI	
		Protection Tape	AEH1059	

Mark	No.	Description	Part No.
NSP		1..SCAN FUKUGO ASSY	AWV1969
		2..SCAN (A) ASSY	AWZ6724
		2..SCAN (B) ASSY	AWZ6725
		2..X CONNECTOR (A) ASSY	AWZ6726
		2..X CONNECTOR (B) ASSY	AWZ6727
		2..BRIDGE A ASSY	AWZ6728
		2..BRIDGE B ASSY	AWZ6729
		2..BRIDGE C ASSY	AWZ6730
		2..BRIDGE D ASSY	AWZ6731
NSP		1..ADDRESS FUKUGO ASSY	AWV1928
NSP		2..ADR CONNECT A ASSY	AWZ6678
NSP		2..ADR CONNECT B ASSY	AWZ6679
NSP		2..ADR CONNECT C ASSY	AWZ6680
NSP		2..ADR CONNECT D ASSY	AWZ6681
		2..ADR RESONANCE ASSY	AWZ6751

Caution in Replacement of Chassis Block

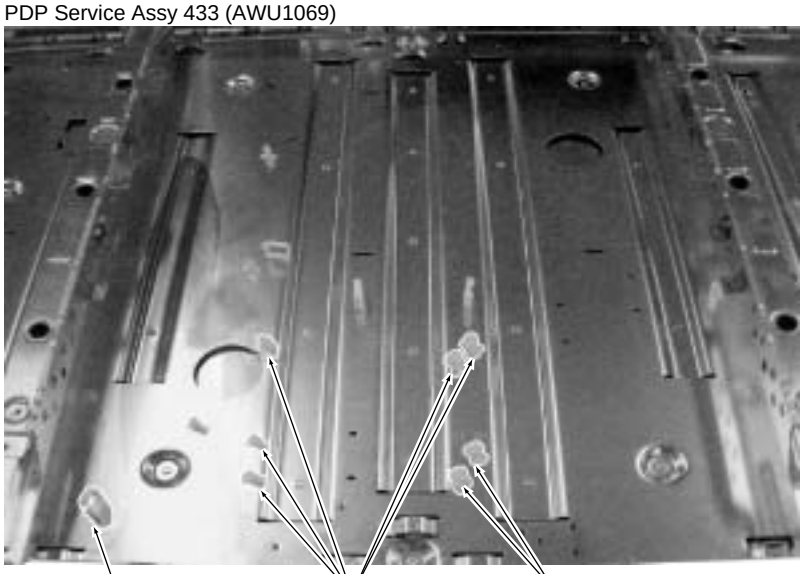
Please order the PDP Service Assy 433 (AWU1069) when replacing the Chassis block.
PDP Service Assy 433 is all common use parts for business, consumer models and module.
It is supplied by installing the Circuit Board Spacer (AEC1872) and the Wire Saddle (AEC1904) as follows.
Therefore it is necessary to remove them in accordance with the models.

Confirm the character of the seal carved near the parts, and then remove them.

- P : for Consumer models only
- W : for Module only
- PW : Common use for Consumer models and Module

* In case of this unit(433PU, 433PE or 433PG), remove the part that "W" is marked(one part).

PDP Service Assy 433 (AWU1069)

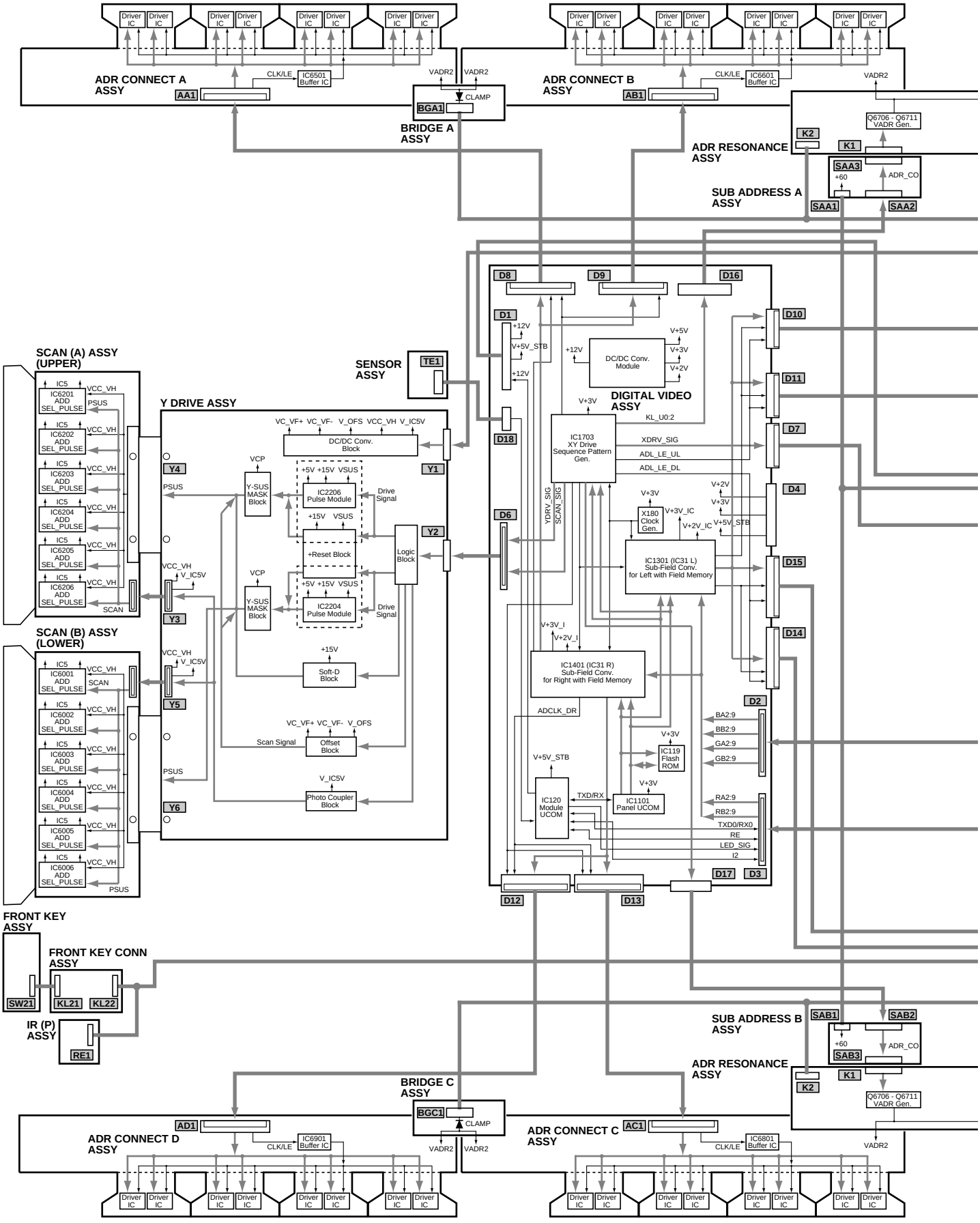


(There is marking of "P" nearby.)

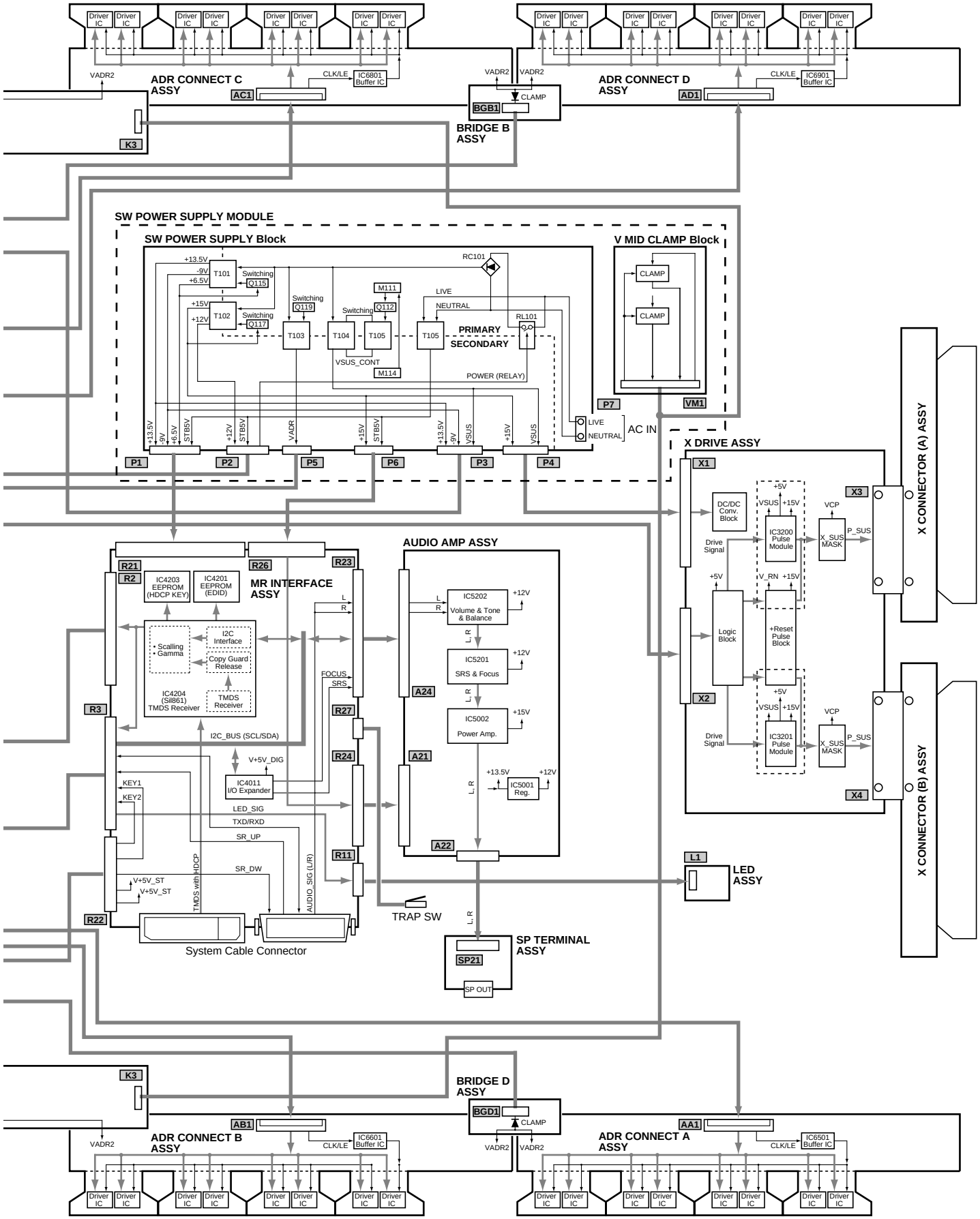
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

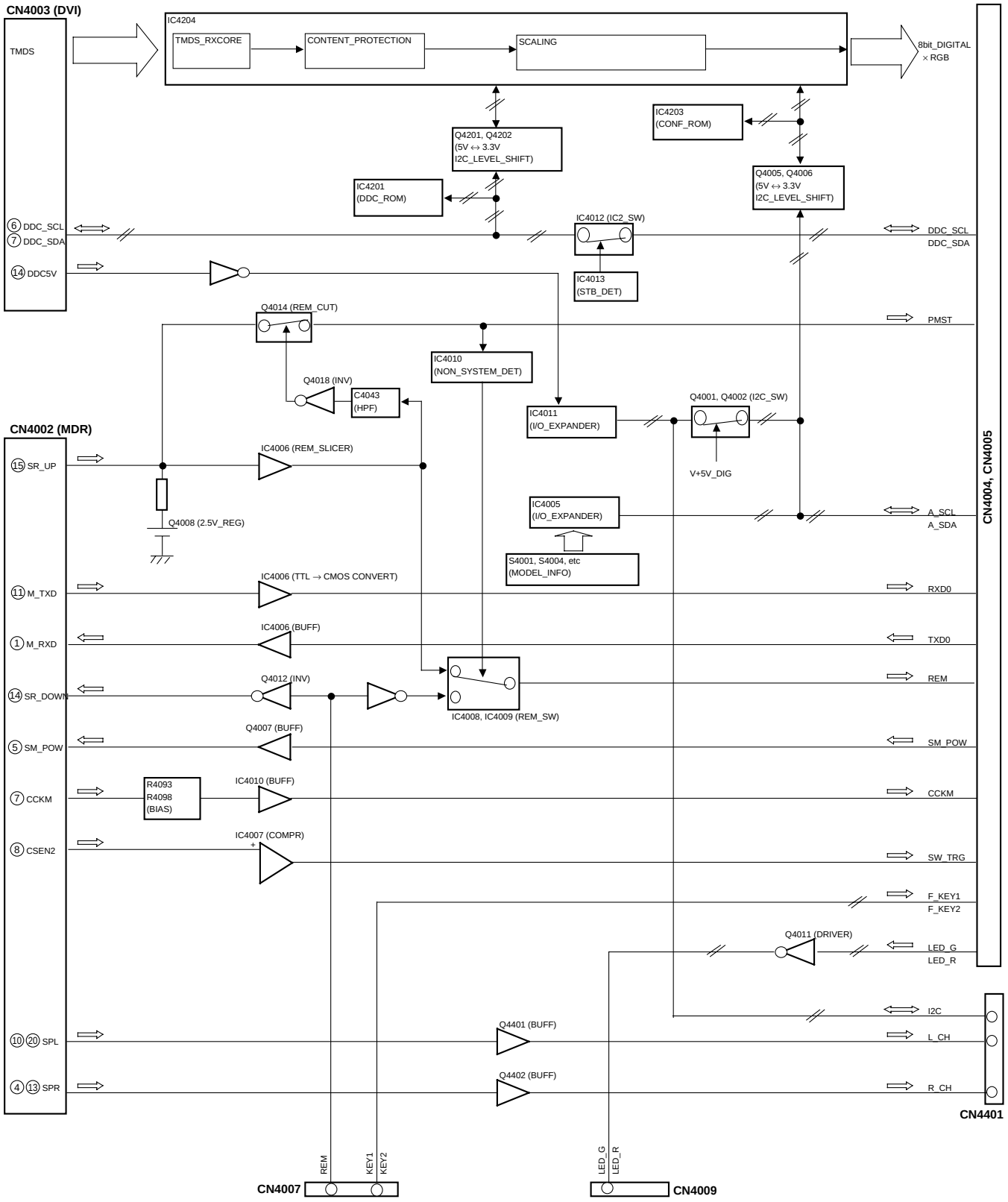
3.1.1 OVERALL DIAGRAM



Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



3.1.2 MR INTERFACE ASSY



■ Voltages

CN4002 (MDR Connector) (↔ Media Receiver)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	M_RXD	232C bus (PDP → MR)	0-5V swing square wave
2	GND		
3	SENCE	Connecting detection for MR	0.0V DC
4	SPR	Audio signal R ch	Analog audio signal wave
5	SMPOW	MR relay control	3.5V DC
6	GND		
7	CCKM	System activation detection	1.9V DC
8	CSEN2	System activation signal	5.0V DC
9	CSEN1	Not used	
10	SPL	Audio signal L ch	Analog audio signal wave
11	M_TXD	232C bus (MR → PDP)	0-3.3V swing square wave
12	GND		
13	SPR	Audio signal R ch	Analog audio signal wave
14	SR_DW	Remote control signal	5.0V DC
15	SR_UP	MDR connecting detection signal multiplex remote control signal	3.75V DC
16	GND		
17	FRASH_W	Not used	
18	SRST	Not used	
19	GND		
20	SPL	Audio signal L ch	Analog audio signal wave

CN4003 (DVI Connector) (↔ Media Receiver)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	RX2-	DVI signal	DVI signal
2	RX2+	DVI signal	DVI signal
3	GND		
4	NC		
5	NC		
6	DDC_SCL	I2C for DDC	0-5V swing square wave
7	DDC_SDA	I2C for DDC	0-5V swing square wave
8	NC		
9	RX1-	DVI signal	DVI signal
10	RX1+	DVI signal	DVI signal
11	GND		
12	NC		
13	NC		
14	DDC_+5V	I2C power supply for DDC	5.0V DC
15	GND		
16	HPD	HOT_PLUG detection	5.0V DC
17	RX0-	DVI signal	DVI signal
18	RX0+	DVI signal	DVI signal
19	GND		
20	NC		
21	NC		
22	GND		
23	RXC+	DVI signal	DVI signal
24	RXC-	DVI signal	DVI signal

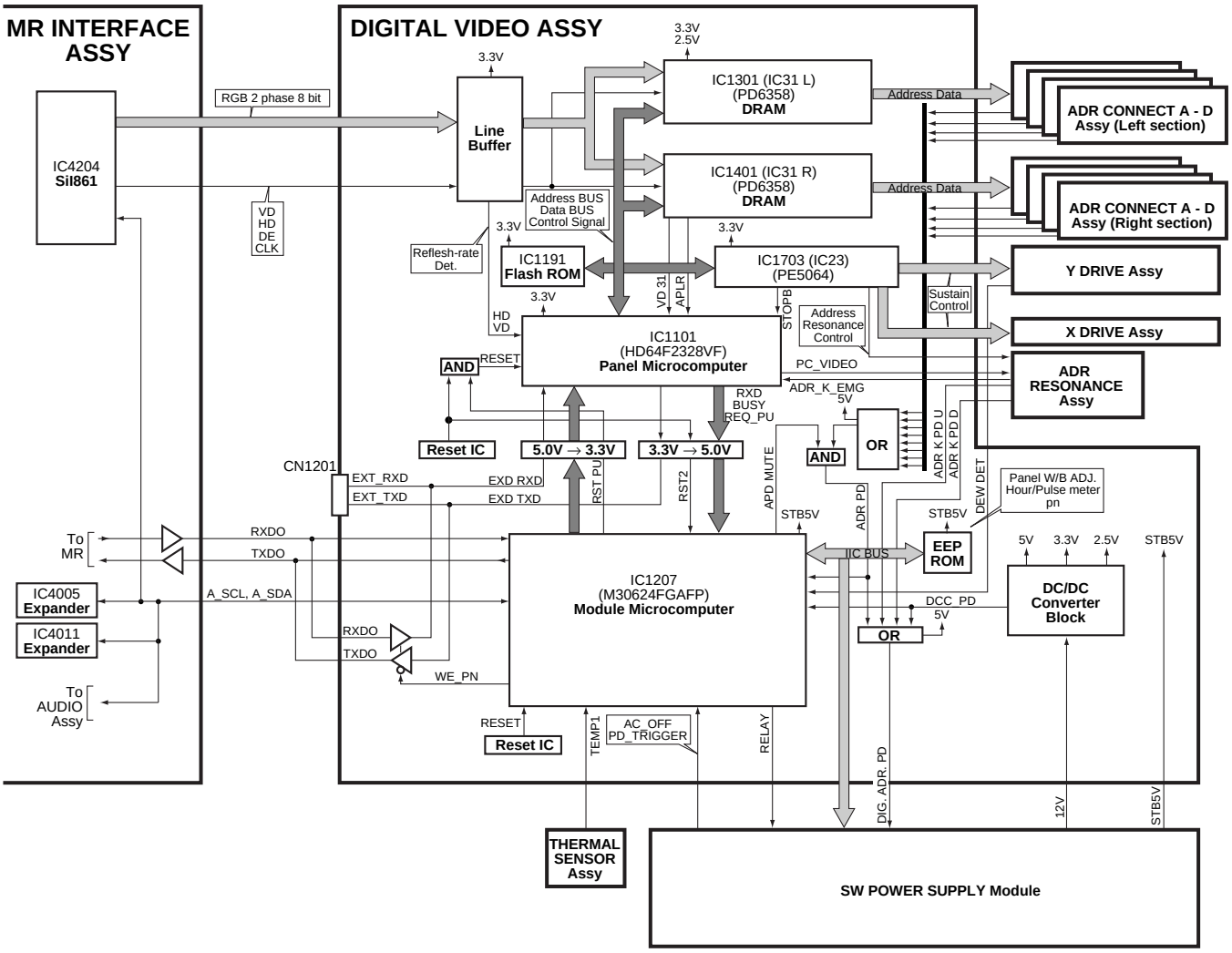
CN4004 (50P_FFC Connector) (↔ DIGITAL VIDEO Assy)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	GND		
2	GND		
3	NC		
4	NC		
5	NC		
6	NC		
7	BB0	8 bit video signal	0-3.3V swing square wave
8	BA0	8 bit video signal	0-3.3V swing square wave
9	BB1	8 bit video signal	0-3.3V swing square wave
10	BA1	8 bit video signal	0-3.3V swing square wave
11	BB2	8 bit video signal	0-3.3V swing square wave
12	BA2	8 bit video signal	0-3.3V swing square wave
13	BB3	8 bit video signal	0-3.3V swing square wave
14	BA3	8 bit video signal	0-3.3V swing square wave
15	BB4	8 bit video signal	0-3.3V swing square wave
16	BA4	8 bit video signal	0-3.3V swing square wave
17	BB5	8 bit video signal	0-3.3V swing square wave
18	BA5	8 bit video signal	0-3.3V swing square wave
19	BB6	8 bit video signal	0-3.3V swing square wave
20	BA6	8 bit video signal	0-3.3V swing square wave
21	BB7	8 bit video signal	0-3.3V swing square wave
22	BA7	8 bit video signal	0-3.3V swing square wave
23	GND		
24	GND		
25	NC		
26	NC		
27	NC		
28	NC		
29	GB0	8 bit video signal	0-3.3V swing square wave
30	GA0	8 bit video signal	0-3.3V swing square wave
31	GB1	8 bit video signal	0-3.3V swing square wave
32	GA1	8 bit video signal	0-3.3V swing square wave
33	GB2	8 bit video signal	0-3.3V swing square wave
34	GA2	8 bit video signal	0-3.3V swing square wave
35	GB3	8 bit video signal	0-3.3V swing square wave
36	GA3	8 bit video signal	0-3.3V swing square wave
37	GB4	8 bit video signal	0-3.3V swing square wave
38	GA4	8 bit video signal	0-3.3V swing square wave
39	GB5	8 bit video signal	0-3.3V swing square wave
40	GA5	8 bit video signal	0-3.3V swing square wave
41	GB6	8 bit video signal	0-3.3V swing square wave
42	GA6	8 bit video signal	0-3.3V swing square wave
43	GB7	8 bit video signal	0-3.3V swing square wave
44	GA7	8 bit video signal	0-3.3V swing square wave
45	GND		
46	GND		
47	NC		
48	NC		
49	GND		
50	GND		

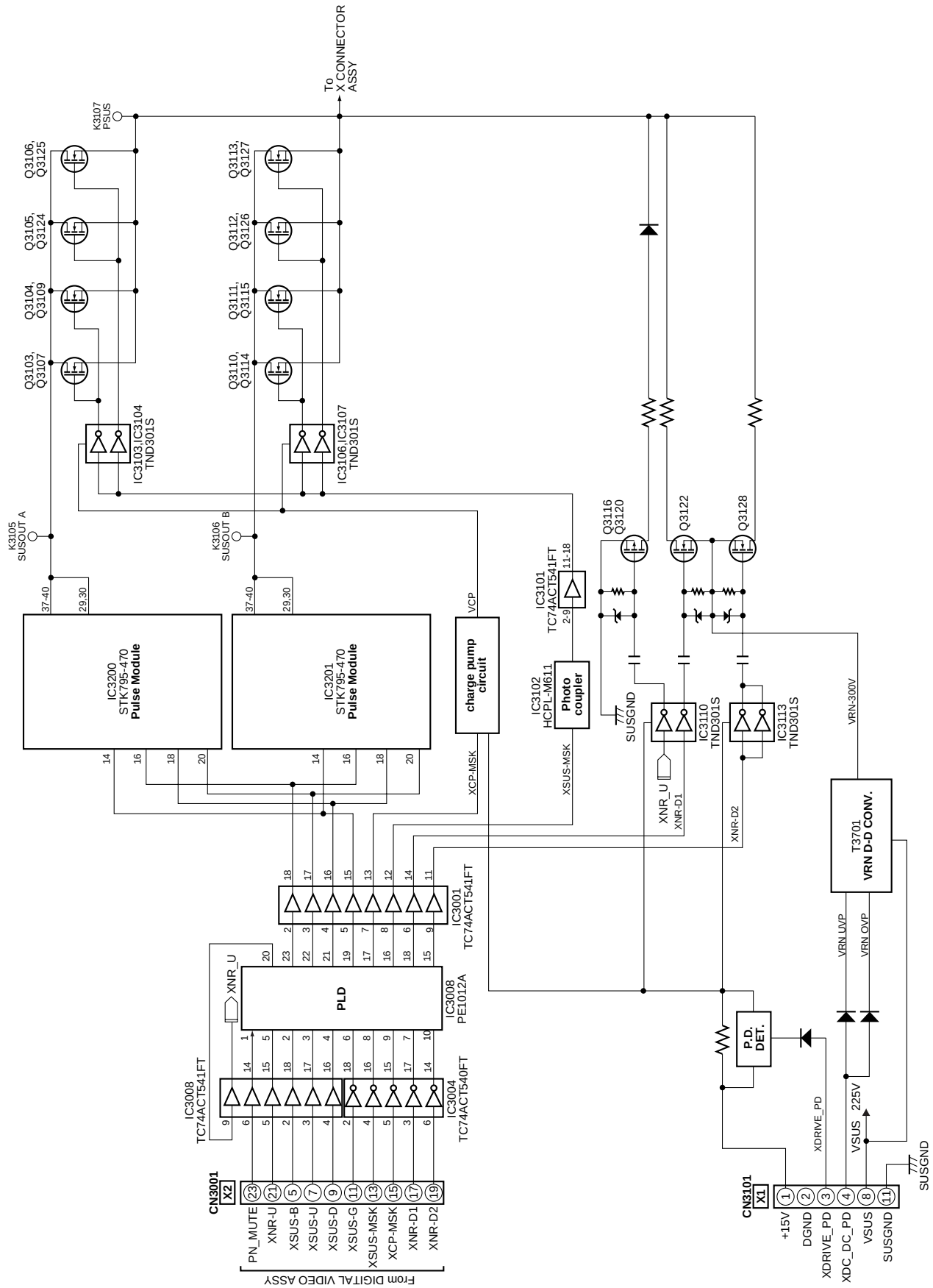
CN4005 (50P_FFC Connector) (↔ DIGITAL VIDEO Assy)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	NC		
2	NC		
3	NC		
4	NC		
5	RB0	8 bit video signal	0-3.3V swing square wave
6	RA0	8 bit video signal	0-3.3V swing square wave
7	RB1	8 bit video signal	0-3.3V swing square wave
8	RA1	8 bit video signal	0-3.3V swing square wave
9	RB2	8 bit video signal	0-3.3V swing square wave
10	RA2	8 bit video signal	0-3.3V swing square wave
11	RB3	8 bit video signal	0-3.3V swing square wave
12	RA3	8 bit video signal	0-3.3V swing square wave
13	RB4	8 bit video signal	0-3.3V swing square wave
14	RA4	8 bit video signal	0-3.3V swing square wave
15	RB5	8 bit video signal	0-3.3V swing square wave
16	RA5	8 bit video signal	0-3.3V swing square wave
17	RB6	8 bit video signal	0-3.3V swing square wave
18	RA6	8 bit video signal	0-3.3V swing square wave
19	RB7	8 bit video signal	0-3.3V swing square wave
20	RA7	8 bit video signal	0-3.3V swing square wave
21	GND		
22	CLK	Clock	0-3.3V swing square wave (40MHz)
23	GND		
24	DE	Data enable	0-3.3V swing square wave (+ polarity)
25	GND		
26	HD	Horizontal sync. signal	0-3.3V swing square wave
27	GND		(- polarity 48.4kHz)
28	VD	Vertical sync. signal	0-3.3V swing square wave
29	GND		(- polarity 60.0Hz)
30	A_SCL	I2C bus	0-5V swing square wave
31	F_KEY1	Front key signal 1	5.0V DC
32	PMST	MDR connecttion Detect signal	3.75V DC
33	SMPOW	MRrelay control	5.0V DC
34	A_MUTE	Audio mute	0.0V DC
35	CCKM	System activation detect	1.9V DC
36	M_STATE	Sil861 I2C bus master infomation	0.0V DC
37	SW_STC	Not used	
38	A_NG	Not used	
39	SW_TRG	System activation signal	5.0V DC
40	F_KEY2	Front key signal 2	5.0V DC
41	A_SDA	I2C bus	0-5V swing square wave
42	*LED_G	Green LED control signal	0.0V DC
43	TXD0	232C bus	0-5V swing square wave
44	*LED_R	Red LED control signal	5.0V DC
45	RXD0	232C bus	0-5V swing square wave
46	DDC_SCL	I2C for DDC	0-5V swing square wave
47	REM	Remote control signal	5.0V DC
48	DDC_SDA	I2C for DDC	0-5V swing square wave
49	GND		
50	GND		

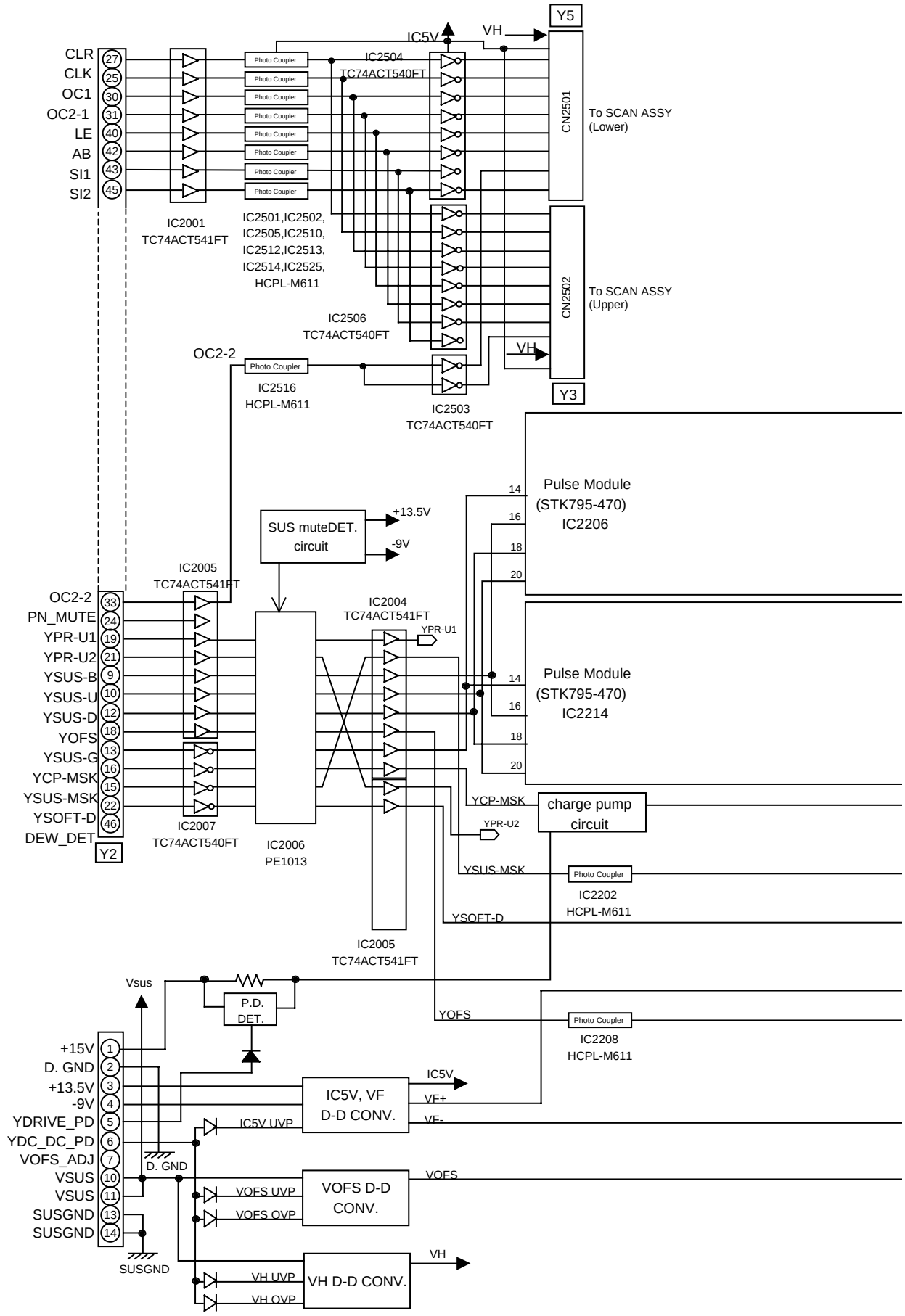
3.1.3 DIGITAL VIDEO ASSY

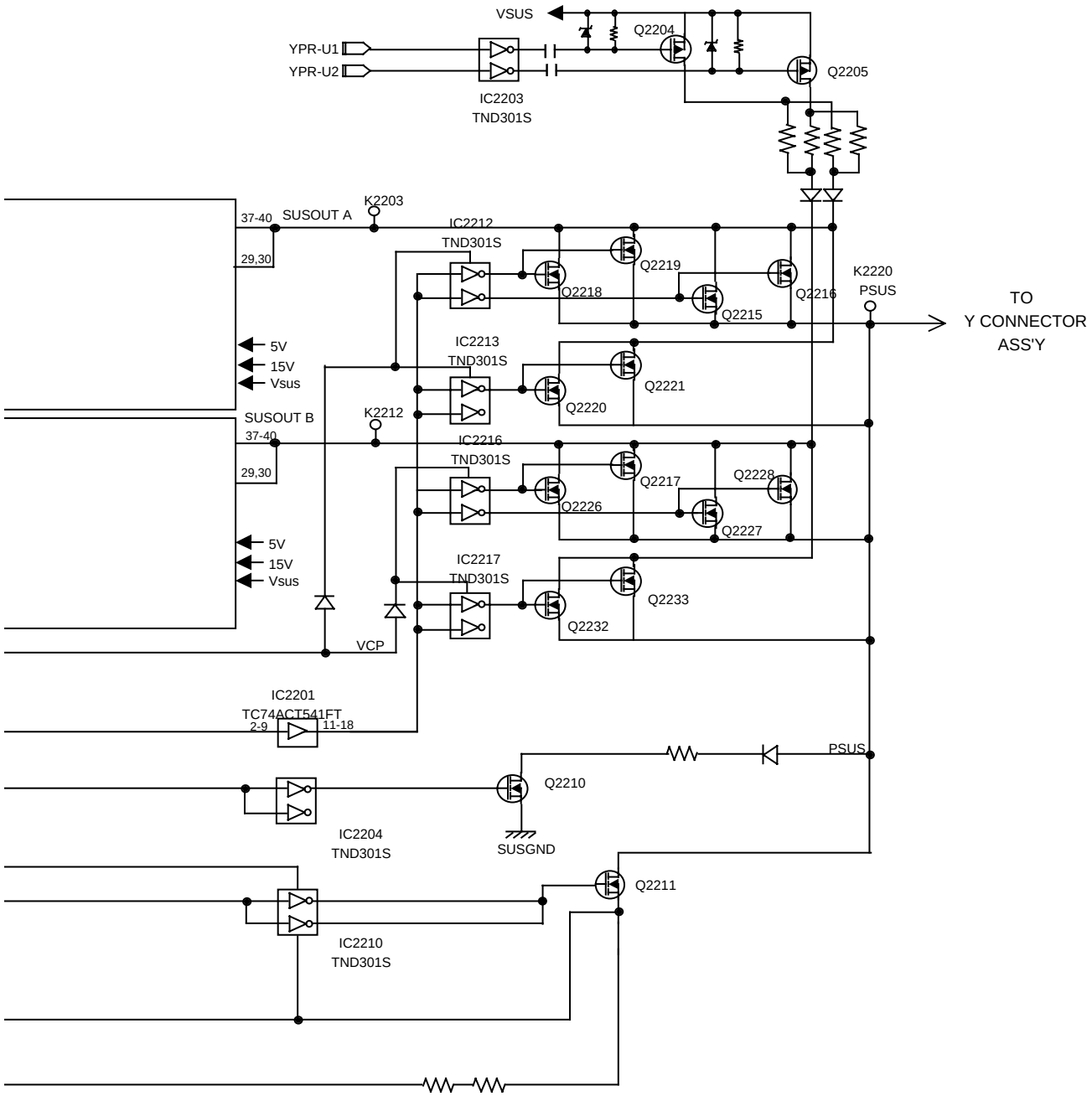


3.1.4 X DRIVE ASSY

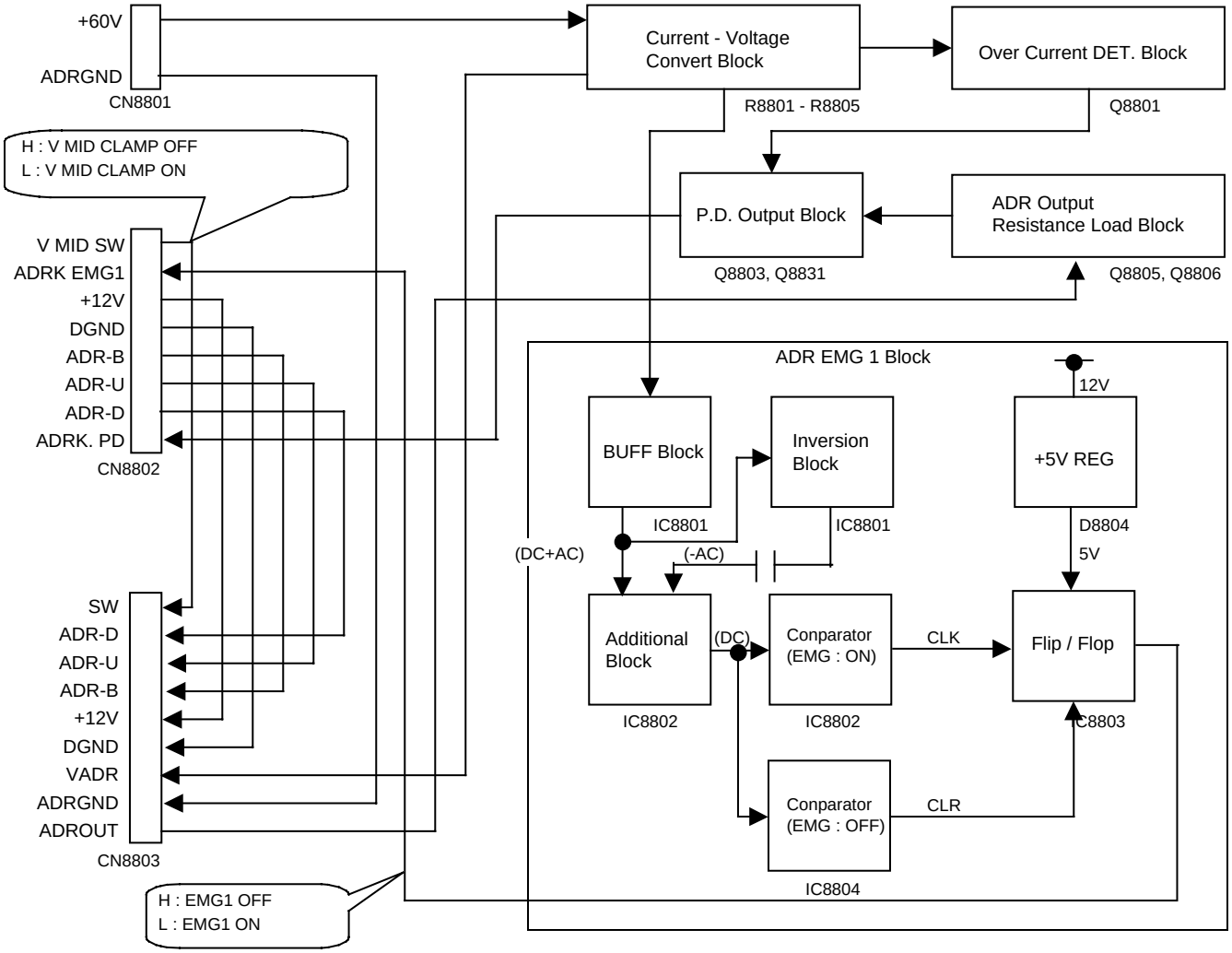


3.1.5 Y DRIVE ASSY

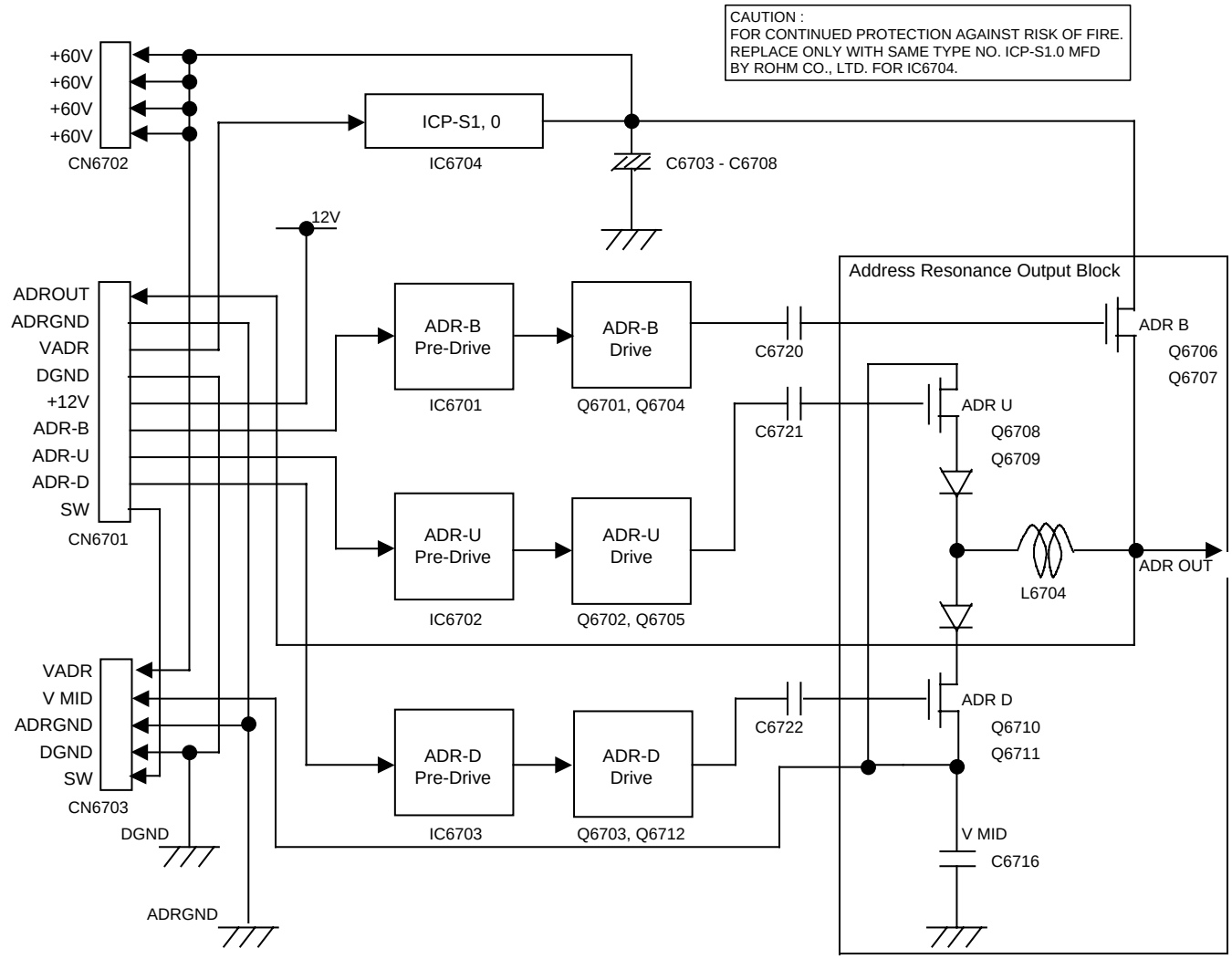



VSUS
Q2204
YPR-U1
YPR-U2
IC2203
TND301S
Q2205
K2203
37-40
SUSOUT A
29,30
IC2212
TND301S
Q2219
Q2218
Q2216
Q2215
K2220
PSUS
TO
Y CONNECTOR
ASS'Y
5V
15V
Vsus
IC2213
TND301S
Q2221
Q2220
K2212
SUSOUT B
37-40
29,30
IC2216
TND301S
Q2217
Q2228
Q2226
Q2227
5V
15V
Vsus
IC2217
TND301S
Q2233
Q2232
VCP
IC2201
TC74ACT541FT
2-9
11-18
PSUS
Q2210
IC2204
TND301S
SUSGND
Q2211
IC2210
TND301S

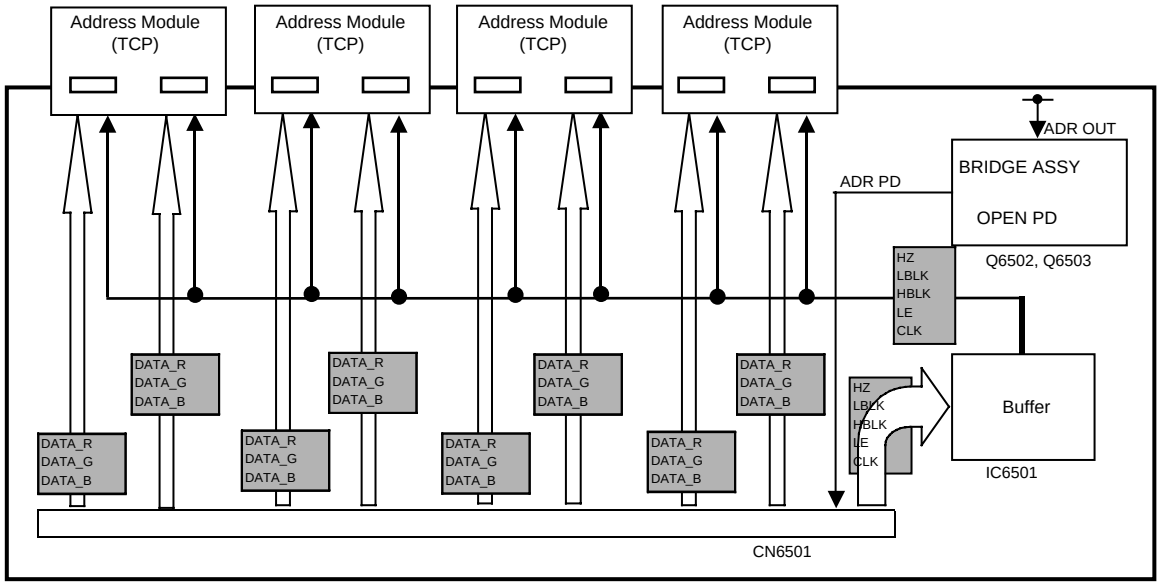
3.1.6 SUB ADDRESS A and B ASSYS



3.1.7 ADR RESONANCE ASSY



3.1.8 ADR CONNECT A, B, C and D ASSYS



3.1.9 AUDIO AMP and SP TERMINAL ASSYS

AUDIO AMP ASSY

IC5202 (CXA2021S)

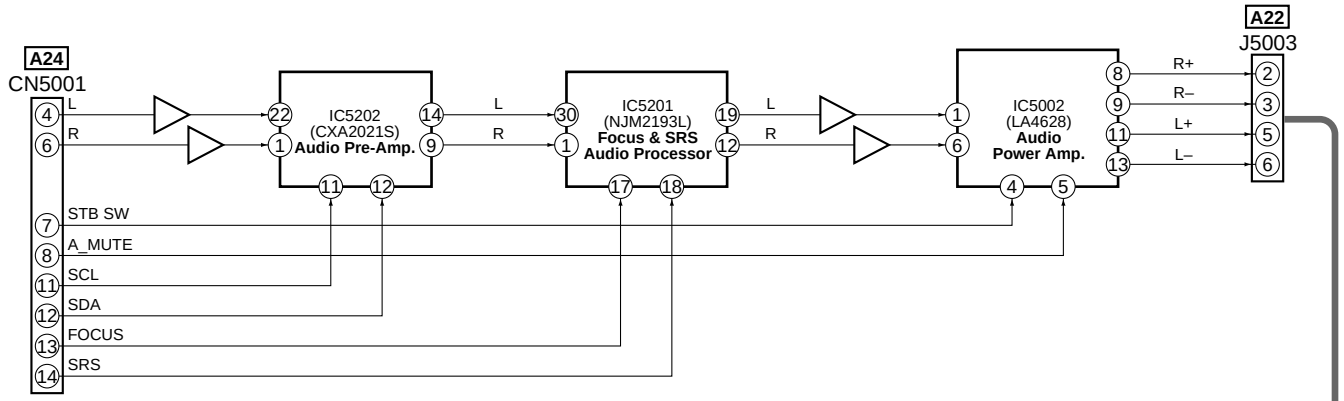
No.	Voltage (V)	No.	Voltage (V)
1	5.9	12	5.25
2	0	13	1.73
3	5.95	14	5.95
4	5.94	15	5.92
5	5.98	16	5.91
6	6.02	17	5.93
7	6.02	18	5.92
8	7.38	19	5.94
9	5.95	20	5.95
10	1.55	21	11.91
11	5.24	22	5.9

IC5201 (NJM2193L)

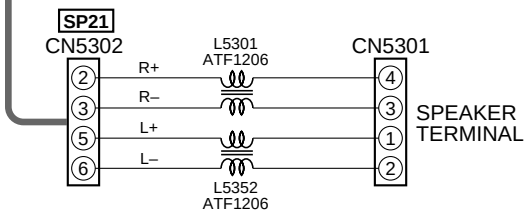
No.	Voltage (V)	No.	Voltage (V)
1	5.95	16	11.91
2	5.94	17	0
3	5.84	18	0
4	5.98	19	5.98
5	5.98	20	5.91
6	5.97	21	5.97
7	5.98	22	5.98
8	5.98	23	5.98
9	5.98	24	5.98
10	5.97	25	5.97
11	5.97	26	5.98
12	5.98	27	5.98
13	5.96	28	5.84
14	5.98	29	5.94
15	0	30	5.95

IC5002 (LA4628)

No.	Voltage (V)
1	1.6
2	7.5
3	0
4	3.37
5	2.29
6	1.6
7	1.97
8	7.3
9	7.3
10	0
11	7.3
12	0
13	7.3
14	15



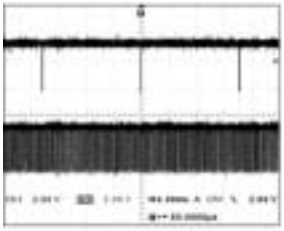
SP TERMINAL ASSY



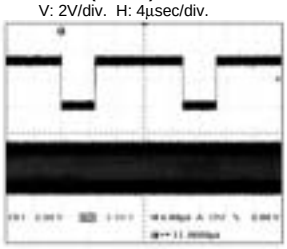
3.2 WAVEFORMS

DIGITAL VIDEO ASSY

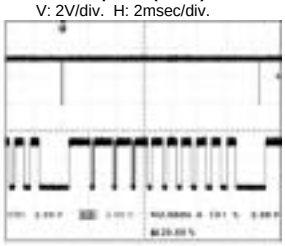
1 **K1327 (VDI)**
K1328 (HDI)
V: 2V/div. H: 4msec/div.



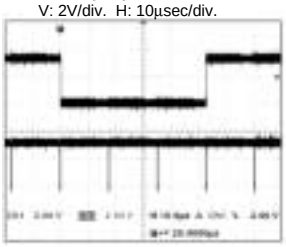
4 **K1326 (DEI)**
K1333 (VCLKL)
V: 2V/div. H: 4µsec/div.



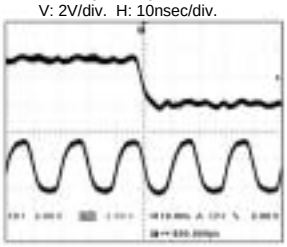
8 **K1308 (VDRB)**
IC1501 - pin 15 (LBLK)
V: 2V/div. H: 2msec/div.



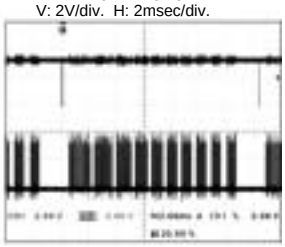
1 **K1327 (VDI)**
K1328 (HDI)
V: 2V/div. H: 10µsec/div.



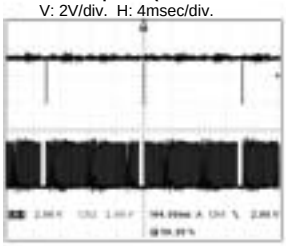
4 **K1326 (DEI)**
K1333 (VCLKL)
V: 2V/div. H: 10nsec/div.



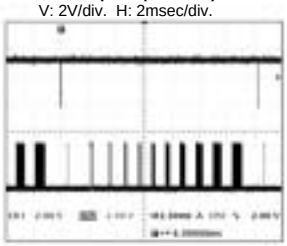
9 **K1308 (VDRB)**
IC1501 - pin 13 (LE)
V: 2V/div. H: 2msec/div.



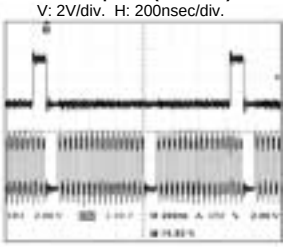
2 **K1327 (VDI)**
CN1004 pin 49 (R DIGITAL VIDEO)
V: 2V/div. H: 4msec/div.



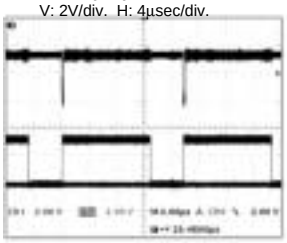
5 **K1308 (VDRB)**
R1713 - pin 7 (XSUS_B)
V: 2V/div. H: 2msec/div.



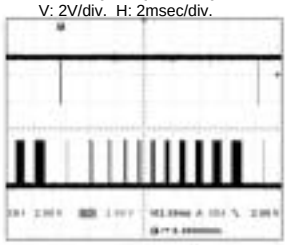
10 **IC1501 - pin 13 (LE)**
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 200nsec/div.



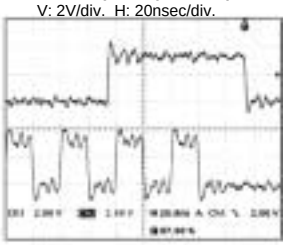
3 **K1328 (HDI)**
K1326 (DEI)
V: 2V/div. H: 4µsec/div.



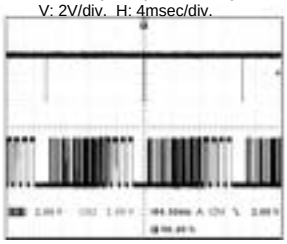
6 **K1308 (VDRB)**
R1703 - pin 8 (YSUS_B)
V: 2V/div. H: 2msec/div.



10 **IC1501 - pin 13 (LE)**
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 20nsec/div.

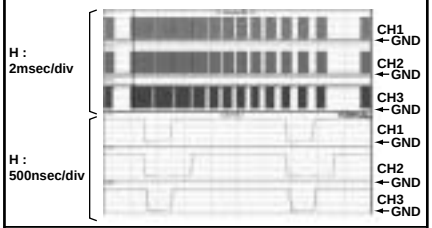


7 **K1308 (VDRB)**
R1343 - pin 8 (RDAT_DL0)
V: 2V/div. H: 4msec/div.

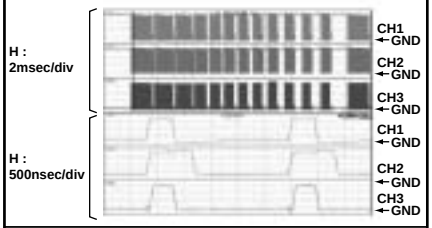


ADR RESONANCE ASSY

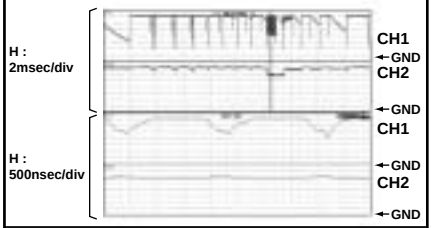
1 **CH1 : IC6702 - pin 2**
CH2 : IC6701 - pin 2
CH3 : IC6703 - pin 2
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



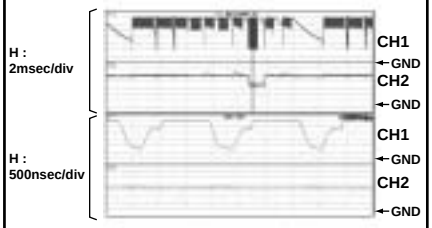
2 **CH1 : D6706 Cathode**
CH2 : D6703 Cathode
CH3 : D6708 Cathode
V: 2V/div.
(Input : VIDEO, Signal : Color bar)



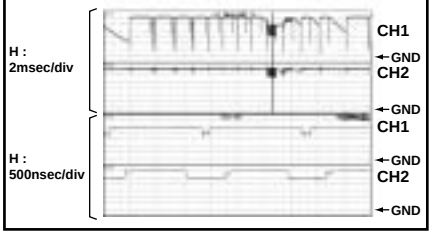
3 **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : VIDEO, Signal : Color bar)



4 **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : PC, Signal : Color bar)

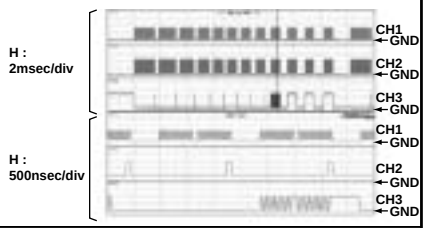


5 **CH1 : Q6708 Drain**
CH2 : Q6710 Drain
V: 10V/div.
(Input : VIDEO, Signal : Color bar)

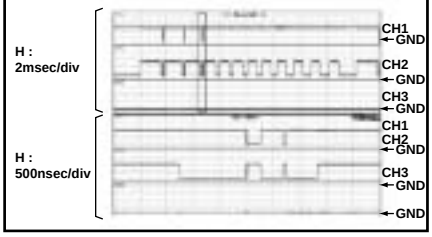


ADR CONNECT A - D ASSY

1 **CH1 : IC6501 - pin 8 (CLK)**
CH2 : IC6501 - pin 6 (LE)
CH3 : IC6501 - (DATA)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

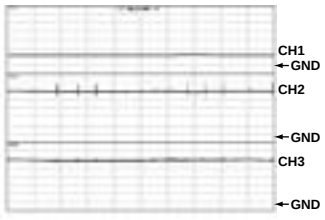


2 **CH1 : IC6501 - pin 5 (HBLK)**
CH2 : IC6501 - pin 3 (LBLK)
CH3 : IC6501 - pin 2 (HZ)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

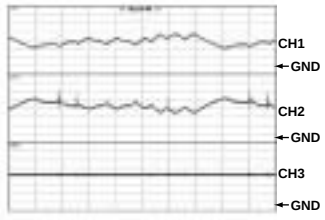


SUB ADDRESS A, B ASSY

1 **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)



2 **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)



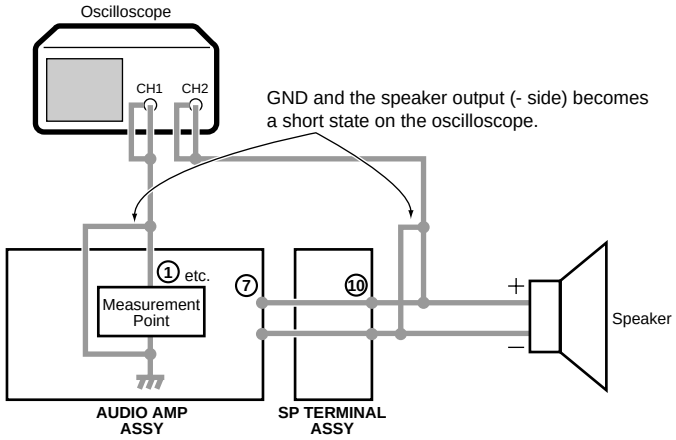
AUDIO SECTION

● Measurement condition

Video Input Signal : FULL FIELD COLOR-BAR
Audio Input Signal : 1kHz Sine Carve 0.2Vrms
Volume : 60 (MAX)
AV Selection : STANDARD
SRS : OFF
FOCUS : OFF

● Caution in the measurement

Audio Power Amp. (IC5002: LA4628) on the AUDIO AMP Assy is BTL system, and, as for the power amplifier and the speaker output, ± poles becomes hot for the ground. Therefore be careful not to connect the measuring instrument as the following figures. (Power amplifier may be damaged.)

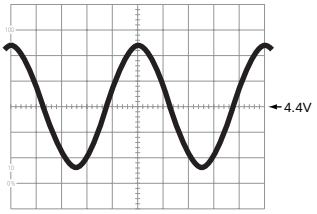


Wrong connection example

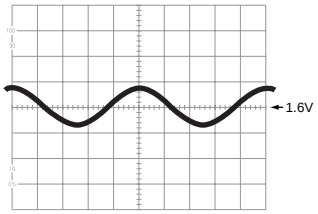
AUDIO AMP ASSY

SP TERMINAL ASSY

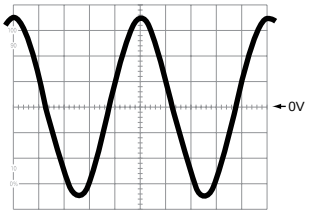
① CN5001 - pin 4 (L) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



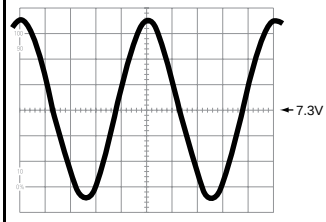
④ IC5002 - pin 1 (IN1) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



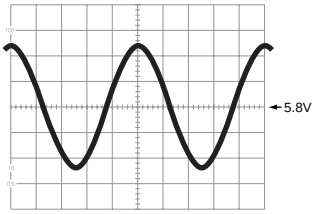
⑦ J5003 - pin 5 (L+) ↔ pin 6 (L–)
V: 2V/div. H: 0.2msec/div.



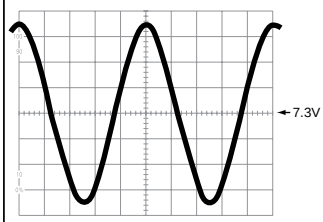
⑧ CN5301 - pin 1 (L+) ↔ GND
V: 1V/div. H: 0.2msec/div.



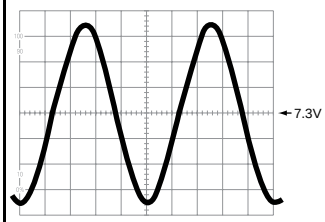
② IC5202 - pin 14 (LOUT) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



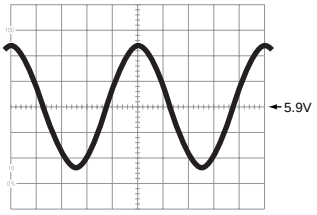
⑤ J5003 - pin 5 (L+) ↔ GND
V: 1V/div. H: 0.2msec/div.



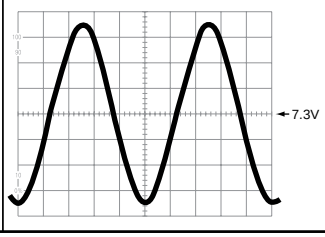
⑨ CN5301 - pin 2 (L–) ↔ GND
V: 1V/div. H: 0.2msec/div.



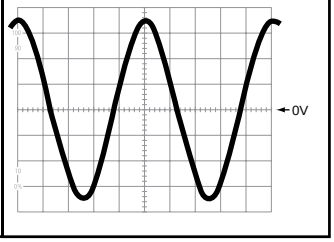
③ IC5201 - pin 19 (FOCUSOUTL) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



⑥ J5003 - pin 6 (L–) ↔ GND
V: 1V/div. H: 0.2msec/div.



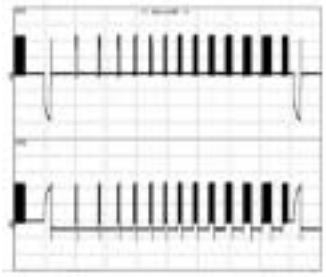
⑩ CN5301 - pin 1 (L+) ↔ pin 2 (L–)
V: 2V/div. H: 0.2msec/div.



Sustain Waveforms

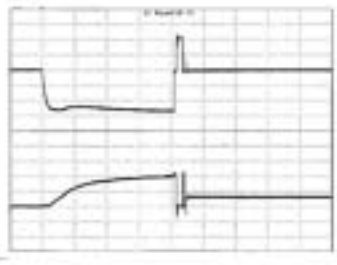
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.



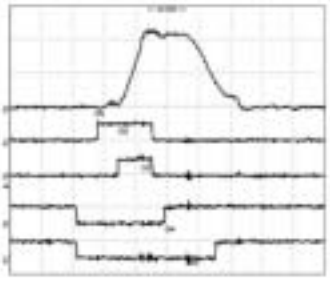
● Sustain Waveform (reset pulse)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 100µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 100µsec/div.



● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500nsec/div.
ch 2 : K2028 (YSUS_U) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 3 : K2027 (YSUS_B) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 4 : K2029 (YSUS_D) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 5 : K2037 (YSUS_G) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.

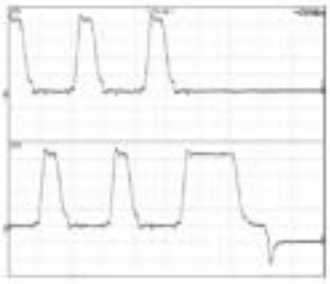


● Sustain Waveform (sustain) First half

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 5µsec/div.

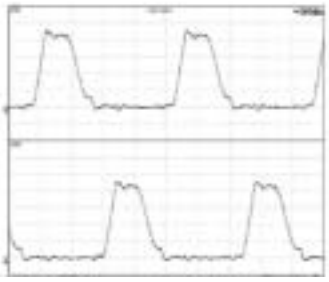
● Sustain Waveform (sustain) Last half

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 2µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 2µsec/div.



● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 1µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 1µsec/div.



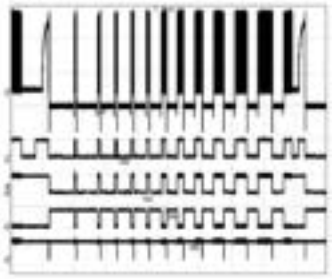
● Sustain Waveform (reset pulse)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 5µsec/div.

Drive Pulse Waveforms

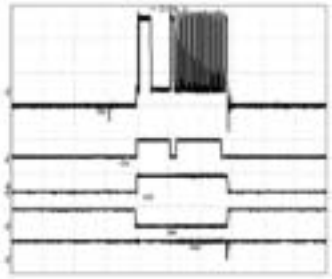
● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 2msec/div.



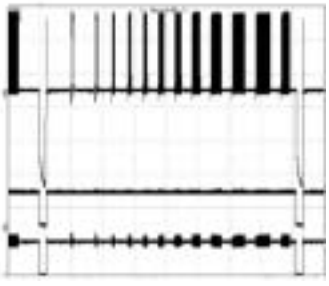
● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 50µsec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.



● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K3017 (XCP_MSK) - K3005 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K3015 (XSUS_MSK) - K3005 (DGND)
V: 5V/div. H: 2msec/div.



5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10¹* →	*561*	····· *RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10³* →	*473*	····· *RD1/4PU 4 7 3 J*
0.5 Ω	→ *R50*		····· *RN2H R 5 0 K*
1 Ω	→ *1R0*		····· *RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10¹* →	*5621*	····· *RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	SCAN FUKUGO ASSY	AWV1969
	2	SCAN (A) ASSY	AWZ6724
	2	SCAN (B) ASSY	AWZ6725
	2	X CONNECTOR (A) ASSY	AWZ6726
	2	X CONNECTOR (B) ASSY	AWZ6727
	2	BRIDGE A ASSY	AWZ6728
	2	BRIDGE B ASSY	AWZ6729
	2	BRIDGE C ASSY	AWZ6730
	2	BRIDGE D ASSY	AWZ6731
NSP	1	ADDRESS FUKUGO ASSY	AWV1928
NSP	2	ADR CONNECT A ASSY	AWZ6678
NSP	2	ADR CONNECT B ASSY	AWZ6679
NSP	2	ADR CONNECT C ASSY	AWZ6680
NSP	2	ADR CONNECT D ASSY	AWZ6681
	2	ADR RESONANCE ASSY	AWZ6751
	1	X DRIVE ASSY	AWV1985
NSP	1	HD Y DRIVE ASSY	AWV1991
	2	SUB ADDRESS A ASSY	AWZ6692
	2	SUB ADDRESS B ASSY	AWZ6693
	2	SENSOR ASSY	AWZ6696
	2	Y DRIVE ASSY	AWZ6749
	1	DIGITAL VIDEO ASSY	AWV1971
NSP	1	HD FUKUGO ASSY	AWV1952
	2	LED ASSY	AWZ6655
	2	FRONT KEY ASSY	AWZ6656
	2	FRONT KEY CONN ASSY	AWZ6657
	2	IR (P) ASSY	AWZ6658
	2	MR INTERFACE ASSY	AWZ6699
NSP	1	HD AUDIO ASSY	AWV1935
	2	AUDIO AMP ASSY	AWZ6687
	2	SP TERMINAL ASSY	AWZ6688
⚠	1	SW Power Supply Module	AXY1059

SCAN (B) ASSY [AWZ6725]

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC6001-IC6006	SN755864APZP
		D6007	KU10N16

CAPACITORS

	C6001,C6002,C6011,C6012	ACG1088
	C6021,C6022,C6031,C6032	ACG1088
	C6041,C6042,C6051,C6052	ACG1088
	(0.1uF/250V)	
	C6004,C6020,C6029,C6033,C6049	CCSRCH151J50
	C6058,C6060,C6062-C6066	CCSRCH151J50
	C6005,C6009,C6013,C6015	CCSRCH181J50
	C6026,C6027,C6038,C6040,C6044	CCSRCH181J50
	C6048,C6054,C6059	CCSRCH181J50
	C6007,C6008,C6014,C6019,C6025	CCSRCH331J50
	C6028,C6035,C6039,C6046,C6047	CCSRCH331J50
	C6056,C6057	CCSRCH331J50
	C6003,C6006,C6017,C6018	CCSRCH390J50
	C6023,C6024,C6034,C6037,C6043	CCSRCH390J50
	C6045,C6053,C6055	CCSRCH390J50
	C6010,C6016,C6030,C6036,C6050	CKSRYB105K6R3
	C6061	CKSRYB105K6R3

RESISTORS

	R6007,R6012,R6021,R6028,R6032	RAB4C221J
	R6040	RAB4C221J
	Other Resistors	RS1/16S###J

OTHERS

	CN6001 15P CONNECTOR	AKP1218
	K6001,K6012,K6018,K6025,K6031	AKX9002
	K6038,K6044 TEST PIN	AKX9002

SCAN (A) ASSY [AWZ6724]

SEMICONDUCTORS

	IC6201-IC6206	SN755864APZP
	D6207	KU10N16

CAPACITORS

	C6201,C6202,C6212,C6213	ACG1088
	C6222,C6223,C6232,C6233	ACG1088
	C6242,C6243,C6252,C6253	ACG1088
	(0.1uF/250V)	
	C6203,C6205,C6220,C6231,C6235	CCSRCH151J50
	C6251,C6259,C6262-C6266	CCSRCH151J50

Mark	No.	Description	Part No.
	C6206,C6210,C6215,C6219,C6227		CCSRCH181J50
	C6229,C6236,C6240,C6244,C6246		CCSRCH181J50
	C6255,C6260		CCSRCH181J50
	C6208,C6209,C6217,C6218,C6226		CCSRCH331J50
	C6230,C6238,C6239,C6245,C6250		CCSRCH331J50
	C6257,C6258		CCSRCH331J50
	C6204,C6207,C6214,C6216		CCSRCH390J50
	C6224,C6225,C6234,C6237		CCSRCH390J50
	C6248,C6249,C6254,C6256		CCSRCH390J50
	C6211,C6221,C6228,C6241,C6247		CKSRYB105K6R3
	C6261		CKSRYB105K6R3
RESISTORS			
	R6207,R6209,R6222,R6228,R6232		RAB4C221J
	R6239		RAB4C221J
	Other Resistors		RS1/16S###J
OTHERS			
	CN6201	15P CONNECTOR	AKP1218
	K6202,K6212,K6219,K6225,K6231		AKX9002
	K6239,K6244	TEST PIN	AKX9002

X CONNECTOR (A) ASSY [AWZ6726]

Mark	No.	Description	Part No.
RESISTORS			
	All Resistors		RS1/16S###J

X CONNECTOR (B) ASSY [AWZ6727]

Mark	No.	Description	Part No.
RESISTORS			
	All Resistors		RS1/16S###J

BRIDGE A ASSY [AWZ6728]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D6421		D1FL20U(S)
CAPACITORS			
	C6421	(0.1uF/100V)	ACG1098
OTHERS			
	CN6421	PH CONNECTOR	B4B-PH-SM3

BRIDGE B ASSY [AWZ6729]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D6431		D1FL20U(S)
CAPACITORS			
	C6431	(0.1uF/100V)	ACG1098
OTHERS			
	CN6431	PH CONNECTOR	B4B-PH-SM3

BRIDGE C ASSY [AWZ6730]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D6441		D1FL20U(S)
CAPACITORS			
	C6441	(0.1uF/100V)	ACG1098
OTHERS			
	CN6441	PH CONNECTOR	B4B-PH-SM3

BRIDGE D ASSY [AWZ6731]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D6451		D1FL20U(S)
CAPACITORS			
	C6451	(0.1uF/100V)	ACG1098
OTHERS			
	CN6451		B4B-PH-SM3

ADR CONNECT A ASSY [AWZ6678]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC6501		TC74VHC541FT
	Q6502		2SC2712
	Q6503		2SK209
	D6501		DA227
COILS AND FILTERS			
	L6501,L6502	(22uH/0.11A)	ATH1081
CAPACITORS			
	C6504,C6513-C6520		ACG1105
	C6528	(330pF/100V)	ACG1105
	C6531,C6533,C6534	(47uF/6.3V)	ACH1341
	C6536-C6538		CCSRCH121J50
	C6507-C6510,C6522-C6525,C6532		CKSRYF104Z16
	C6535		CKSRYF104Z16
RESISTORS			
	R6519-R6522,R6526,R6528		RAB4C100J
	R6530,R6531,R6534-R6537,R6541		RAB4C100J
	R6543,R6545,R6547		RAB4C100J
	R6516		RAB4C473J
	Other Resistors		RS1/16S###J
OTHERS			
	CN6501	55P CONNECTOR	AKM1202

ADR CONNECT B ASSY [AWZ6679]

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC6601		TC74VHC541FT
	Q6602		2SC2712
	Q6603		2SK209
	D6601		DA227
COILS AND FILTERS			
	L6601,L6602	(22uH/0.11A)	ATH1081
CAPACITORS			
	C6604,C6613-C6620		ACG1105
	C6628	(330pF/100V)	ACG1105
	C6631,C6633,C6634	(47uF/6.3V)	ACH1341
	C6636-C6638		CCSRCH121J50
	C6607-C6610,C6622-C6625,C6632		CKSRYF104Z16
	C6635		CKSRYF104Z16
RESISTORS			
	R6619-R6622,R6626,R6628		RAB4C100J
	R6630,R6631,R6634-R6637,R6641		RAB4C100J
	R6643,R6645,R6647		RAB4C100J
	R6616		RAB4C473J
	Other Resistors		RS1/16S###J

Mark	No.	Description	Part No.
OTHERS			
	CN6601	55P CONNECTOR	AKM1202

ADR CONNECT C ASSY [AWZ6680]

SEMICONDUCTORS			
	IC6801		TC74VHC541FT
	Q6802		2SC2712
	Q6803		2SK209
	D6801		DA227
COILS AND FILTERS			
	L6801,L6802	(22uH/0.11A)	ATH1081
CAPACITORS			
	C6804,C6813-C6820		ACG1105
	C6828	(330pF/100V)	ACG1105
	C6831,C6833,C6834	(47uF/6.3V)	ACH1341
	C6836-C6838		CCSRCH121J50
	C6807-C6810,C6822-C6825,C6832		CKSRYF104Z16
	C6835		CKSRYF104Z16
RESISTORS			
	R6819-R6822,R6826,R6828		RAB4C100J
	R6830,R6831,R6834-R6837,R6841		RAB4C100J
	R6843,R6845,R6847		RAB4C100J
	R6816		RAB4C473J
	Other Resistors		RS1/16S###J
OTHERS			
	CN6801	55P CONNECTOR	AKM1202

ADR CONNECT D ASSY [AWZ6681]

SEMICONDUCTORS			
	IC6901		TC74VHC541FT
	Q6902		2SC2712
	Q6903		2SK209
	D6901		DA227
COILS AND FILTERS			
	L6901,L6902	(22uH/0.11A)	ATH1081
CAPACITORS			
	C6904,C6913-C6920		ACG1105
	C6928	(330pF/100V)	ACG1105
	C6931,C6933,C6934	(47uF/6.3V)	ACH1341
	C6936-C6938		CCSRCH121J50
	C6907-C6910,C6922-C6925,C6932		CKSRYF104Z16
	C6935		CKSRYF104Z16
RESISTORS			
	R6919-R6922,R6926,R6928		RAB4C100J
	R6930,R6931,R6934-R6937,R6941		RAB4C100J
	R6943,R6945,R6947		RAB4C100J
	R6916		RAB4C473J
	Other Resistors		RS1/16S###J
OTHERS			
	CN6901	55P CONNECTOR	AKM1202

ADR RESONANCE ASSY [AWZ6751]

SEMICONDUCTORS			
	IC6704		ICP-S1.0
	IC6701-IC6703		TND301S
	Q6704,Q6705,Q6712		2SB1132
	Q6701-Q6703		2SD1664
	Q6710,Q6711		2SK3483-Z
	Q6706-Q6709		FX20ASJ-2
	D6701,D6703,D6704,D6706		1SS355
	D6709,D6710,D6717,D6718		D1FL20U(S)
	D6711-D6714		SPX-62S
	D6702,D6705,D6716		UDZ15B
COILS AND FILTERS			
	L6704	CHOKE COIL	ATH1121
CAPACITORS			
	C6716		ACE1162
	C6720,C6721	(0.01uF/100V)	ACG1101
	C6722	(0.0068F/100V)	ACG1102
	C6703-C6708	(56uF/80V)	ACH1347
	C6701,C6702,C6709		CEHV470M16
	C6710,C6711,C6713		CKSRYF104Z16
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	CN6701	23P CONNECTOR	AKP1221
	CN6702	PH CONNECTOR	B4B-PH-SM3
	CN6703	PH CONNECTOR	B5B-PH-SM3

X DRIVE ASSY [AWV1985]

[X LOGIC BLOCK]

SEMICONDUCTORS			
	IC3003		PE1012A
	IC3004		TC74ACT540FT
	IC3001,IC3008		TC74ACT541FT
COILS AND FILTERS			
	L3001		LFEA100J
CAPACITORS			
	C3005		CEHAT470M16
	C3001,C3003,C3004,C3006		CKSRYF104Z50
RESISTORS			
	R3009-R3012		RAB4C0R0J
	R3001,R3003,R3026,R3029		RAB4C470J
	R3002,R3005,R3030,R3033		RAB4C472J
	Other Resistors		RS1/16S###J
OTHERS			
	CN3001	30P CONNECTOR	KF050HA30L

[X SUS BLOCK]

SEMICONDUCTORS			
	IC3102		HCPL-M611
	IC3200,IC3201		STK795-470
	IC3101		TC74ACT541FT
	IC3103,IC3104,IC3106,IC3107		TND301S
	IC3110,IC3113		TND301S
	IC3109		UPC78L05T
	Q3116,Q3119,Q3120		2SJ522
	Q3101		2SK2503
	Q3103-Q3106,Q3109-Q3114		FS16VS-9
	Q3124-Q3127		FS16VS-9

Mark No.	Description	Part No.
	Q3122,Q3128	FS7VS-14A
	Q3102	HN1B04FU
	D3119	1SS184
	D3108,D3124,D3125,D3133	1SS355
	D3126,D3131,D3200,D3203,D3205	D1FL40
	D3208,D3212-D3215	D1FL40
	D3101,D3102,D3117,D3202,D3207	EC11FS4
	D3210,D3211	EC11FS4
	D3216,D3217	RB751V-40
	D3120,D3127-D3129,D3135,D3136	UDZ15B
COILS AND FILTERS		
	L3206,L3207	ATH1112
	RADIAL LEAD INDUCTOR	
	L3201,L3204 CHOKE COIL	ATH1113
	L3202,L3205,L3210,L3211	ATH1118
	CHOKE COIL	
	L3101	LFEA100J
	L3107,L3108	LFEA101J
CAPACITORS		
	C3205,C3206,C3212,C3213	ACE1160
	C3225,C3226 (1.5uF)	ACE1160
	C3139,C3143 (0.1uF/630V)	ACG1092
	C3223,C3224 (100pF/630V)	ACG1104
	C3132 (47uF/350V)	ACH1346
	C3200-C3202,C3207-C3209	ACH1352
	(330uF/280V)	
	C3112	CEHAT101M16
	C3102,C3107,C3115,C3204,C3211	CEHAT101M25
	C3101	CEHAT221M25
	C3104,C3106	CEHAT470M16
	C3135	CEHAT470M25
	C3154,C3163	CKSRYB332K50
	C3137,C3138	CKSRYB473K25
	C3103,C3105,C3108,C3109,C3111	CKSRYF104Z50
	C3113,C3114,C3117,C3130,C3140	CKSRYF104Z50
RESISTORS		
	R3183,R3184,R3187 (15ohm)	ACN1156
	R3113,R3114,R3121,R3122,R3126	RAB4C100J
	R3132,R3140,R3141	RAB4C100J
	R3212,R3217,R3230,R3234,R3237	RS1/10S184J
	R3240,R3242,R3245	RS1/10S184J
	R3211,R3213,R3214,R3218	RS1/16S2000F
	R3134,R3163	RS1/2S100J
	R3103	RS1/2S102J
	R3109	RS1/2S2R2J
	R3102	RS1/2S561J
	R3215,R3216	RS1MMF101J
	R3228,R3229	RS1MMF122J
	R3178,R3179	RS3LMF181J
	VR3200,VR3204 (1kohm)	ACP1089
	Other Resistors	RS1/16S###J
OTHERS		
	K3203,K3213 TEST PIN	AKX9002
	KN3105-KN3114 GROUND PLATE	ANK-142
	CN3101 13P PLUG	KM250MA13

[X DD CON BLOCK]

SEMICONDUCTORS

	IC3712	AN1431M
	IC3701	MIP161
	IC3702-IC3704	TLP181(GR)
	Q3701	2SC2712
	Q3800	HN1A01FU
	D3710,D3711	1SS355
	D3705,D3706	D1FL20U(S)
	D3702	EC8FS6
	D3708,D3709,D3713	RD110P
	D3703	UDZ18B
	D3707	UDZS5.6B
COILS AND FILTERS		
	L3701 RADIAL LEAD INDUCTOR	ATH1110
	T3701 VRN TRANSFORMER	ATK1153
CAPACITORS		
	C3701 (22uF/315V)	ACH1345
	C3717 (47uF/350V)	ACH1346
	C3704	CEHAT101M16
	C3706,C3711,C3714	CEHAT101M25
	C3712	CEHAT331M16
	C3705	CKSQYF104Z50
	C3703,C3707,C3708,C3710	CKSRYB104K16
	C3715,C3716	CKSRYB104K16
RESISTORS		
	R3732	RS1/16S1001F
	R3806	RS1/16S1802F
	R3701-R3704,R3706-R3717	RS1/16S1803F
	R3805	RS1/16S2702F
	R3731	RS1/16S3900F
	R3802	RS1/16S5601F
	R3738,R3739	RS1/2S102J
	R3800,R3801	RS1/2S823J
	VR3701 (1kohm)	ACP1089
	Other Resistors	RS1/16S###J

Y DRIVE ASSY [AWZ6749]

[Y DRIVE LOGIC BLOCK]

SEMICONDUCTORS

	IC2006	PE1013B
	IC2007	TC74ACT540FT
	IC2001,IC2003-IC2005	TC74ACT541FT
	IC2101	TLP181(GR)
COILS AND FILTERS		
	L2001	LFEA100J
CAPACITORS		
	C2101	CEHAT100M50
	C2003	CEHAT470M16
	C2001,C2004,C2005,C2007,C2008	CKSRYF104Z50
	C2010,C2102,C2104,C2122	CKSRYF104Z50
RESISTORS		
	R2015-R2018	RAB4C0R0J
	R2001,R2002,R2005,R2011	RAB4C470J
	R2037,R2038	RAB4C470J
	R2035,R2036,R2039,R2040	RAB4C472J
	Other Resistors	RS1/16S###J
OTHERS		
	CN2001 50P CONNECTOR	AKM1201

Mark	No.	Description	Part No.
		[Y DRIVE SUS BLOCK]	
		SEMICONDUCTORS	
A		IC2202,IC2208	HCPL-M611
		IC2206,IC2214	STK795-470
		IC2201	TC74ACT541FT
		IC2203,IC2204,IC2210,IC2212	TND301S
		IC2213,IC2216,IC2217	TND301S
		IC2205,IC2209	UPC78L05T
		Q2203	2SJ281
		Q2204,Q2205	2SJ522
		Q2201	2SK2503
		Q2215,Q2217-Q2221,Q2226,Q2227	FQB34N20
		Q2232,Q2233	FQB34N20
B		Q2210,Q2211	FS16VS-9
		Q2209	HN1B04FU
		D2225	1SS184
		D2202,D2204	1SS226
		D2211	1SS355
		D2201	D1FL20U(S)
		D2203,D2205,D2214,D2216,D2223	D1FL40
		D2226,D2227,D2243	D1FL40
		D2209	DF20L60
		D2208,D2210,D2212,D2215	EC11FS4
		D2221,D2222,D2228,D2239	EC11FS4
C		D2224,D2229	RB751V-40
		D2206,D2207	UDZ15B
		COILS AND FILTERS	
		L2207 RADIAL LEAD INDUCTOR	ATH1110
		L2213,L2214	ATH1112
		RADIAL LEAD INDUCTOR	
		L2206,L2211 CHOKE COIL	ATH1113
		L2208,L2212,L2215,L2216	ATH1118
		CHOKE COIL	
		L2210	LFEA100J
		L2203,L2205	LFEA101J
D		L2201	LFEA470J
		CAPACITORS	
		C2228,C2230,C2231,C2250-C2252 (1.5uF)	ACE1160
		C2209,C2210 (0.1uF/630V)	ACG1092
		C2233,C2248 (100pF/630V)	ACG1104
		C2211 (47uF/350V)	ACH1346
		C2216,C2217,C2219,C2234-C2236 (330uF/280V)	ACH1352
			ACH1346
		C2221,C2225	CEHAT101M16
		C2204,C2227,C2237,C2240,C2247	CEHAT101M25
E		C2202	CEHAT221M25
		C2232	CEHAT331M2A
		C2218,C2224,C2229	CEHAT470M16
		C2212,C2214	CEHAT470M25
		C2264,C2270	CKSRYB472K50
		C2201,C2203,C2205,C2208,C2213	CKSRYF104Z50
		C2220,C2222,C2223,C2238,C2239	CKSRYF104Z50
		C2241,C2242	CKSRYF104Z50
		RESISTORS	
		R2235,R2273,R2291,R2305,R2315	RAB4C100J
F		R2317,R2342	RAB4C100J
		R2253,R2256,R2270,R2283,R2332	RS1/10S184J
		R2338,R2354,R2355	RS1/10S184J
		R2359-R2362	RS1/16S2000F

Mark	No.	Description	Part No.
		R2263,R2264	RS1/2S100J
		R2203	RS1/2S102J
		R2209	RS1/2S2R2J
		R2202	RS1/2S561J
		R2278,R2303	RS1MMF101J
		R2233,R2234	RS1MMF152J
		R2274,R2275	RS1MMF471J
		R2298,R2299	RS2MMF3R3J
		R2276,R2281	RS3LMFR82J
		VR2201,VR2205 (1kohm)	ACP1089
		Other Resistors	RS1/16S###J
		OTHERS	
		K2206,K2218 TEST PIN	AKX9002
		KN2201-KN2210 GROUND PLATE	ANK-142
		CN2201 15P PLUG	KM250MA15
		[Y DRIVE SCAN BLOCK]	
		SEMICONDUCTORS	
		IC2501,IC2502,IC2505,IC2510	HCPL-M611
		IC2514	HCPL-M611
		IC2504,IC2506	TC74ACT540FT
		COILS AND FILTERS	
		L2501-L2503	LFEA100J
		CAPACITORS	
		C2506,C2527	CEHAT220M2D
		C2502	CEHAT221M16
		C2524,C2525	CEHAT470M16
		C2501,C2503,C2505,C2507,C2508	CKSRYF104Z50
		C2513,C2517	CKSRYF104Z50
		RESISTORS	
		R2502,R2504	RAB4C101J
		Other Resistors	RS1/16S###J
		OTHERS	
		CN2501,CN2502	AKM1200
		15P CONNECTOR	
		[Y DRIVE DD-CON BLOCK]	
		SEMICONDUCTORS	
		IC2715-IC2717	AN1431M
		IC2709	HCNR201
		IC2708,IC2710,IC2718	M5223AFP
		IC2711	MIP0223SC
		IC2701	MIP161
		IC2704	MIP301
		IC2702,IC2703,IC2705-IC2707	TLP181(GR)
		IC2712-IC2714	TLP181(GR)
		Q2701,Q2703	2SC2712
		Q2704	HN1A01FU
		D2712,D2717,D2718,D2732,D2734	1SS355
		D2736,D2737	1SS355
		D2704,D2706,D2707,D2715,D2726	D1FL20U(S)
		D2728	D1FL20U(S)
		D2711	D1FS4
		D2702,D2714,D2727	EC11FS4
		D2725	EC8FS6
		D2733	RD91P
		D2724	U1ZB330
		D2713	U1ZB36

Mark No.	Description	Part No.
D2740		UDZ12B
D2709,D2716		UDZ3.6B
D2729,D2731		UDZ33B
D2703,D2710		UDZ36B
D2720,D2730,D2739		UDZS5.6B

COILS AND FILTERS

L2701	RADIAL LEAD INDUCTOR	ATH1110
T2702	SMD TRANSFORMER	ATK1150
T2703	VH TRANSFORMER	ATK1151
T2701	VOFS TRANSFORMER	ATK1152

CAPACITORS

C2701,C2735 (22uF/315V)	ACH1345
C2706,C2725,C2737	CEHAT101M16
C2709,C2718,C2720,C2739,C2745	CEHAT101M25
C2708	CEHAT101M2A
C2740	CEHAT101M2C
C2704	CEHAT221M25
C2715	CEHAT331M16
C2746	CEHAT331M25
C2723,C2751	CEHAT470M16
C2712	CEHAT471M35
C2711	CKSRYB103K50
C2702,C2705,C2713,C2714,C2719	CKSRYB104K16
C2721,C2722,C2724,C2727,C2729	CKSRYB104K16
C2731,C2733,C2736,C2742,C2743	CKSRYB104K16
C2747-C2749	CKSRYB104K16
C2728,C2730	CKSRYB471K50
C2707,C2738	CKSRYF104Z50

RESISTORS

R2735,R2791	RS1/16S1000F
R2780	RS1/16S1103F
R2715,R2728,R2733	RS1/16S1201F
R2787	RS1/16S1302F
R2766	RS1/16S1501F
R2785	RS1/16S1503F
R2777,R2786	RS1/16S1802F
R2776	RS1/16S2702F
R2705,R2706,R2709,R2710,R2778	RS1/16S3002F
R2781	RS1/16S3002F
R2783	RS1/16S4701F
R2734,R2736	RS1/16S4702F
R2779	RS1/16S5102F
R2773	RS1/16S5601F
R2784	RS1/16S5602F
R2782	RS1/16S6801F
R2744-R2746,R2748-R2753	RS1/16S9102F
R2711,R2716,R2767,R2770	RS1/2S102J
R2788,R2792	RS1/2S561J
R2771,R2772	RS1/2S823J
R2712	RS3LMF272J
VR2702,VR2703 (1kohm)	ACP1089
VR2701 (2.2kohm)	ACP1090
Other Resistors	RS1/16S###J

SUB ADDRESS A ASSY [AWZ6692]

SEMICONDUCTORS

IC8801,IC8802,IC8804	M5223AFP
IC8803	TC74VHC74FT
Q8802	2SA1163
Q8804,Q8805,Q8808	2SC2712
Q8806	2SK209
D8801-D8803,D8809	1SS355
D8806,D8807	DA227
D8808	UDZ27B
D8804	UDZS5.1B

COILS AND FILTERS

L8801 (100uH/0.45A)	ATH1074
L8802,L8803 (22uH/0.11A)	ATH1081

CAPACITORS

C8806	CCSRCH101J50
C8822	CEHV100M16
C8804	CEHV100M35
C8808	CEHV470M16
C8807	CEVNP2R2M35
C8802,C8805,C8809-C8817	CKSRYF104Z16
C8820,C8821	CKSRYF104Z16

RESISTORS

R8806,R8807,R8837,R8838,R8841	RS1/16S1002D
R8858	RS1/16S1202D
R8828,R8829,R8832,R8846,R8864	RS1/16S2202D
R8826,R8827,R8839,R8840	RS1/16S4701D
R8833	RS1/16S4702F
R8859	RS1/16S5602F
R8801,R8802	RS1/2S1R5J
R8803-R8805	RS1/2S2R2J
Other Resistors	RS1/16S###J

OTHERS

CN8803	23P CONNECTOR	AKM1205
CN8801	PH CONNECTOR	S3B-PH-SM3
CN8802	PH CONNECTOR	S8B-PH-SM3

SUB ADDRESS B ASSY [AWZ6693]

SEMICONDUCTORS

IC8901,IC8902,IC8904	M5223AFP
IC8903	TC74VHC74FT
Q8902	2SA1163
Q8904,Q8905,Q8908	2SC2712
Q8906	2SK209
D8901-D8903,D8909	1SS355
D8906,D8907	DA227
D8908	UDZ27B
D8904	UDZS5.1B

COILS AND FILTERS

L8901 (100uH/0.45A)	ATH1074
L8902,L8903 (22uH/0.11A)	ATH1081

CAPACITORS

C8906	CCSRCH101J50
C8922	CEHV100M16
C8904	CEHV100M35
C8908	CEHV470M16
C8907	CEVNP2R2M35
C8902,C8905,C8909-C8917	CKSRYF104Z16
C8920,C8921	CKSRYF104Z16

RESISTORS

R8906,R8907,R8937,R8938,R8941	RS1/16S1002D

Mark	No.	Description	Part No.
	R8958		RS1/16S1202D
	R8928,R8929,R8932,R8946,R8964		RS1/16S2202D
	R8926,R8927,R8939,R8940		RS1/16S4701D
	R8933		RS1/16S4702F
	R8959		RS1/16S5602F
	R8901,R8902		RS1/2S1R5J
	R8903-R8905		RS1/2S2R2J
	Other Resistors		RS1/16S###J

OTHERS

CN8903	23P CONNECTOR	AKM1205
CN8901	PH CONNECTOR	S3B-PH-SM3
CN8902	PH CONNECTOR	S8B-PH-SM3

SENSOR ASSY [AWZ6696]

SEMICONDUCTORS

IC8351	LM50CIM3
IC8352	M5223AFP

CAPACITORS

C8356	CEV470M6R3
C8354	CKSRYB103K50
C8351,C8355	CKSRYF104Z16
C8352,C8353	CKSRYF105Z10

RESISTORS

R8354,R8358	RS1/16S1001F
Other Resistors	RS1/16S###J

DIGITAL VIDEO ASSY [AWV1971]

[INTERFACE BLOCK]

SEMICONDUCTORS

IC1001-IC1008	TC74VHC541FT

COILS AND FILTERS

F1001-F1006	EMI FILTER	ATF1194

CAPACITORS

C1001-C1008	CKSRYF104Z16

RESISTORS

R1044	RAB4C101J
R1001-R1007,R1036,R1063-R1069	RAB4C103J
R1008-R1017,R1019,R1020,R1027	RAB4C470J
R1032,R1034,R1035,R1037,R1038	RAB4C470J
R1040-R1043,R1048,R1049	RAB4C470J
R1051-R1054	RAB4C470J
Other Resistors	RS1/16S###J

OTHERS

CN1003,CN1004 50P CONNECTOR	AKM1201
K1001 TEST PIN	AKX9002
CN1001 PH CONNECTOR	B12B-PH-SM3

[PANEL UCOM BLOCK]

SEMICONDUCTORS

IC1101	HD64F2328VF
IC1103	NC7SZ08P5
IC1102	PST9228N
Q1101,Q1103	DTC143EK
D1101	AEL1171

Mark	No.	Description	Part No.

CAPACITORS

C1123,C1124	CCSRCH7R0D50
C1101	CEV101M4
C1102,C1109,C1110,C1112-C1116	CKSRYB102K50
C1129-C1132	CKSRYB102K50
C1117,C1121	CKSRYB103K50
C1120	CKSRYB472K50
C1103-C1108,C1111,C1118,C1119	CKSRYF104Z16
C1122,C1125-C1128	CKSRYF104Z16

RESISTORS

R1104,R1107,R1110,R1113,R1114	RAB4C472J
R1116,R1121,R1124,R1127,R1129	RAB4C472J
Other Resistors	RS1/16S###J

OTHERS

K1101-K1104,K1107,K1108	AKX9002
TEST PIN	
X1101	ASS1160
CERAMIC RESONATOR (25MHz)	

[MODULE UCOM BLOCK]

SEMICONDUCTORS

IC1204	24LC04B(I)SN
IC1208	PST9246N
IC1202	TC74VHC08FT
IC1201	TC74VHC21FT
IC1205	TC74VHC541FT
IC1203	TC74VHCT541AFT
IC1206	TC7W126FU
D1201,D1202	1SS355

CAPACITORS

C1213,C1243-C1245	CCSRCH470J50
C1235,C1236	CCSRCH7R0D50
C1225,C1232	CEV470M6R3
C1201-C1203,C1206-C1211	CKSRYB102K50
C1214-C1216,C1218,C1219	CKSRYB102K50
C1223,C1224,C1226,C1227,C1229	CKSRYB102K50
C1237,C1238,C1241,C1242,C1247	CKSRYB102K50
C1234	CKSRYB103K50
C1233	CKSRYB472K50
C1204,C1205,C1212,C1217	CKSRYF104Z16
C1221,C1222,C1228,C1230,C1231	CKSRYF104Z16
C1239,C1240,C1246,C1248-C1250	CKSRYF104Z16

RESISTORS

R1209,R1214,R1245	RAB4C101J
R1242	RAB4C103J
R1207	RAB4C123J
R1213,R1216	RAB4C473J
Other Resistors	RS1/16S###J

OTHERS

X1201	ASS1159
CERAMIC RESONATOR (16MHz)	
CN1203 PH CONNECTOR	B3B-PH-SM3
CN1201,CN1202 8P PLUG	CKS3130

[DIGITAL BLOCK]

SEMICONDUCTORS

IC1802	FS781BZB
IC1704	NC7SZ08P5
IC1301,IC1401	PD6358A

Mark No.	Description	Part No.
	IC1703	PE5064A
	IC1501,IC1502,IC1601,IC1602	TC74VCX541FT
	IC1702,IC1801	TC74VHC541FT
	IC1803	TC74VHC74FT
	IC1701	TC74VHCT541AFT
	D1301-D1305	1SS226
COILS AND FILTERS		
	F1301-F1304,F1501-F1505	ATF1194
	F1601-F1605 EMI FILTER	ATF1194
CAPACITORS		
	C1807	CCSRCH271J50
	C1802	CEV100M16
	C1306,C1322,C1406,C1422,C1711	CEV101M4
	C1806	CEV101M4
	C1504-C1508,C1604-C1608,C1712	CKSRYB102K50
	C1303-C1305,C1307-C1321	CKSRYF104Z16
	C1323-C1336,C1403-C1405	CKSRYF104Z16
	C1407-C1421,C1423-C1436,C1501	CKSRYF104Z16
	C1503,C1601,C1603,C1701-C1710	CKSRYF104Z16
	C1713,C1803-C1805	CKSRYF104Z16
RESISTORS		
	R1502,R1517,R1606,R1622	RAB4C101J
	R1307,R1310-R1315,R1317,R1318	RAB4C220J
	R1321,R1322,R1326-R1344,R1407	RAB4C220J
	R1410-R1415,R1417,R1418	RAB4C220J
	R1421,R1422,R1426-R1444	RAB4C220J
	R1501,R1514,R1607,R1627,R1701	RAB4C470J
	R1703-R1709,R1712-R1717	RAB4C470J
	R1551,R1552	RS1/2S680J
	Other Resistors	RS1/16S###J
OTHERS		
	CN1701 50P CONNECTOR	AKM1201
	CN1501,CN1502,CN1504,CN1505	AKM1202
	CN1601,CN1602,CN1604,CN1605	AKM1202
	55P CONNECTOR	
	K1301,K1302,K1308,K1311-K1314	AKX9002
	K1316,K1321,K1324,K1326-K1331	AKX9002
	K1333,K1501,K1502,K1601,K1602	AKX9002
	K1728,K1729 TEST PIN	AKX9002
	X1801	ASS1146
	CRYSTAL RESONATOR (50.000MHz)	
	CN1503,CN1603 PH CONNECTOR	B8B-PH-SM3
	CN1301 8P PLUG	CKS3130
	CN1702 30P CONNECTOR	KF050HA30L

[D-D CONVERTER BLOCK]

SEMICONDUCTORS		
	Q1902,Q1905,Q1907	2SC2712
	Q1903	DTC143EK
	Q1901,Q1904,Q1906	HN1C01FU
	D1903-D1906,D1911,D1912	1SS355
	D1908	HZU2.2B
	D1902,D1909	UDZ3.6B
	D1907	UDZS5.1B
	D1901	UDZS6.8B
CAPACITORS		
	C1904,C1906,C1912	CEV220M16
	C1901-C1903,C1905,C1907-C1911	CKSRYF104Z16

Mark No.	Description	Part No.
RESISTORS		
	R1935,R1936	RS1/2S680J
	Other Resistors	RS1/16S###J
OTHERS		
	K1901-K1906 TEST PIN	AKX9002
	1901 DC-DC CONVERTER	AXY1060
	CN1901 PH CONNECTOR	B13B-PH-SM3

MR INTERFACE ASSY [AWZ6699]

[INTERFACE BLOCK]

SEMICONDUCTORS		
	IC4011	CXA1875AM
	IC4007,IC4010	M5223AFP
	IC4005	M62320FP
	IC4001	PQ05DZ51
	IC4002-IC4004	PQ20VZ1U
	IC4013	PST9228N
	IC4008,IC4009	TC74HC00AF
	IC4012	TC74HC4066AF
	IC4006	TC74VHCT541AFT
	Q4003,Q4004,Q4010	2SA1162
	Q4007,Q4009,Q4013,Q4017,Q4018	2SC2712
	Q4012,Q4016,Q4019-Q4022	DTC124EK
	Q4014	HN1A01FU
	Q4008	HN1B04FU
	Q4001,Q4002,Q4005,Q4006	HN1C01FU
	Q4011,Q4015	RN2902
	D4007,D4008	1SS184
	D4002-D4006	1SS355
SWITCHES AND RELAYS		
	S4001,S4004	ASH1010
CAPACITORS		
	C4023,C4036,C4037	CCSRCH102J50
	C4025,C4032	CCSRCH220J50
	C4029,C4030,C4053,C4054	CCSRCH471J50
	C4001,C4004,C4005,C4008,C4010	CEAT101M10
	C4012,C4013,C4016,C4041,C4042	CEAT101M10
	C4034,C4038,C4050,C4056	CKSRYB105K6R3
	C4043	CKSRYB474K10
	C4027,C4028,C4033,C4051	CKSRYF103Z50
	C4002,C4003,C4006,C4007	CKSRYF104Z16
	C4014,C4015,C4017-C4019,C4024	CKSRYF104Z16
	C4026,C4031,C4035,C4039,C4040	CKSRYF104Z16
	C4044-C4047,C4049,C4052,C4055	CKSRYF104Z16
RESISTORS		
	R4019,R4035,R4054,R4066	RAB4C101J
	R4056	RAB4C471J
	R4007,R4014,R4015,R4117	RS1/16S1001F
	R4106	RS1/16S1002F
	R4107	RS1/16S1502F
	R4098	RS1/16S2201F
	R4078	RS1/16S2202F
	R4074,R4094	RS1/16S3301F
	R4075	RS1/16S4701F
	R4057	RS1/16S5601F
	R4124	RS1/16S5602F
	R4004,R4005,R4115,R4116	RS1/16S8200F

Mark	No.	Description	Part No.
	R4093		RS1/16S8201F
	R4006		RS2MMF2R2J
	Other Resistors		RS1/16S###J
OTHERS			
	CN4004,CN4005		AKM1180
	50P CONNECTOR		
	CN4003	24P DVI SOCKET	AKP1216
	CN4002	SOCKET (20P)	AKP1227
	CN4006,CN4009		B3B-PH-SM3
	3P PH CONNECTOR		
	CN4007	7P PH CONNECTOR	B7B-PH-SM3
	CN4008	8P PLUG	CKS3130

[TMDS RECEIVER BLOCK]

SEMICONDUCTORS

IC4201		24LC01B
IC4203		24LC128(I)SN
IC4202		24LC32A
IC4205		PST9228N
IC4204		SII861CM208
Q4209,Q4212		2SA1162
Q4205,Q4206,Q4213		DTA124EK
Q4203,Q4204,Q4207,Q4208		DTC124EK
Q4210,Q4211,Q4214		DTC124EK
Q4201,Q4202		HN1C01FU
D4201		1SS184
D4203,D4204		1SS226
D4205-D4209		1SS355
D4202		RD6.8MB

COILS AND FILTERS

F4201,F4203-F4205	EMI FILTER	ATF1194

CAPACITORS

C4208,C4210,C4215,C4222,C4230		CCSRCH331J50
C4255,C4257		CCSRCH331J50
C4262		CCSRCH471J50
C4206,C4207,C4212,C4214,C4217		CCSRCH820J50
C4219,C4220,C4224,C4227,C4229		CCSRCH820J50
C4231-C4233,C4236,C4241,C4244		CCSRCH820J50
C4248,C4253,C4254,C4258		CCSRCH820J50
C4239,C4242,C4246,C4250		CEAT101M10
C4202,C4237,C4238		CEAT470M10
C4264		CKSRYB103K50
C4265		CKSRYB105K6R3
C4260		CKSRYB472K50
C4263		CKSRYB474K10
C4201,C4203-C4205,C4209,C4211		CKSRYF104Z16
C4213,C4216,C4218,C4221,C4225		CKSRYF104Z16
C4234,C4235,C4240,C4243,C4245		CKSRYF104Z16
C4247,C4251,C4252,C4256,C4259		CKSRYF104Z16
C4261		CKSRYF104Z16
C4223,C4226,C4228,C4249		CKSRYF105Z10
C4266-C4270		CKSRYF105Z10

RESISTORS

R4213-R4217,R4245,R4247		RAB4C181J
R4253-R4255		RAB4C181J
R4241		RAB4C680J
R4250		RS1/16S5100D
Other Resistors		RS1/16S###J

Mark	No.	Description	Part No.
OTHERS			
	K4201-K4207	TEST PIN	AKX9002
	X4201		ASS1163
	CRYSTAL RESONATOR (16.000MHz)		

[AUDIO BLOCK]

SEMICONDUCTORS

Q4403		2SA1162
Q4401,Q4402		2SC2712
D4401-D4404		1SS355

CAPACITORS

C4408,C4417		CEANP100M50
C4403		CEAT101M10
C4407		CEAT101M25
C4402		CEAT220M50
C4425,C4426		CEAT470M25
C4410		CKSRYF104Z16

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN4403	7P PH CONNECTOR	B7B-PH-SM3
CN4404	8P PH CONNECTOR	B8B-PH-SM3

LED ASSY [AWZ6655]

SEMICONDUCTORS

D4751		AEL1170

OTHERS

CN4751	3P PH CONNECTOR	S3B-PH-SM3

FRONT KEY ASSY [AWZ6656]

SWITCHES AND RELAYS

S4801-S4806		ASG1088

CAPACITORS

C4801-C4803		CKSRYF104Z16

RESISTORS

Other Resistors		RS1/16S###J

OTHERS

CN4801	6P FFC CONNECTOR	AKM1208

FRONT KEY CONN ASSY [AWZ6657]

SEMICONDUCTORS

D4851,D4852		1SS226

OTHERS

CN4851	6P FFC CONNECTOR	AKM1208
CN4852	4P PH CONNECTOR	B4B-PH-SM3

IR (P) ASSY [AWZ6658]

SEMICONDUCTORS

Q4901		2SC2712
D4901		1SS355

CAPACITORS

C4901		CEV470M6R3
C4902		CKSRYB103K50

Mark	No.	Description	Part No.
	C4903		CKSRYB472K50
	C4904		CKSRYF104Z16

RESISTORS

	All Resistors		RS1/16S###J

OTHERS

	4901	REMOTE RECEIVER UNIT	GP1UM26RK

AUDIO AMP ASSY [AWZ6687]

SEMICONDUCTORS

	IC5202		CXA2021S
	IC5002		LA4628
	IC5201		NJM2193L
	IC5001		PQ12RD1B
	Q5002,Q5005		2SA1048
	Q5009,Q5012,Q5013		2SC2458

COILS AND FILTERS

	L5001	FERRITE CORE	ATX1037

CAPACITORS

	C5203,C5227		CCCCH221J50
	C5213,C5226		CEHANP220M25
	C5232,C5233,C5235		CEHAT100M50
	C5015,C5029,C5033,C5201,C5206		CEHAT101M25
	C5242		CEHAT221M25
	C5032,C5034		CEHAT2R2M50
	C5044,C5050,C5051		CEHAT330M25
	C5005		CEHAT331M16
	C5238		CEHAT470M16
	C5002		CEHAT471M16
	C5013		CEHAT472M25
	C5208,C5211,C5212,C5218		CEHAT4R7M50
	C5222,C5223,C5234		CEHAT4R7M50
	C5045		CEHATR47M50
	C5014,C5204,C5217,C5220,C5228		CFTLA103J50
	C5237		CFTLA103J50
	C5035,C5046,C5053,C5056,C5216		CFTLA104J50
	C5221,C5239		CFTLA104J50
	C5214,C5230		CFTLA224J50
	C5225		CFTLA333J50
	C5219,C5236		CFTLA473J50
	C5003,C5006,C5016,C5042,C5207		CKCYB103K50
	C5210		CKCYB103K50
	C5043,C5052,C5205,C5229		CQMA122J50
	C5224		CQMA222J50
	C5215,C5231		CQMA392J50

RESISTORS

	R5053,R5054,R5075,R5076		RD1/2MMF2R2J
	R5001		RD1/2MMF3R9J
	Other Resistors		RD1/4PU###J

OTHERS

	J5003	6P HOUSING WIRE	ADX2729
	J5002	8P HOUSING WIRE	ADX2731
	5006		AEC1818
	5001,5002,5004,5005	SCREW	VBB30P100FNI

Mark	No.	Description	Part No.

SP TERMINAL ASSY [AWZ6688]

COILS AND FILTERS

⚠	L5301,L5352	LINE FILTER	ATF1206

CAPACITORS

⚠	C5306,C5307		CCCCH101J50
⚠	C5301,C5305,C5351,C5355		CCCCH221J50
⚠	C5302,C5352		CKCYB332K50
⚠	C5303,C5353		CKCYF473Z50

RESISTORS

⚠	R5301,R5302,R5351,R5352		RD1/2MMF100J

OTHERS

	CN5301	4P SPEAKER TERMINAL	AKE1058

SW Power Supply Module [AXY1059]

SW Power Supply Module has no service part

6. ADJUSTMENT

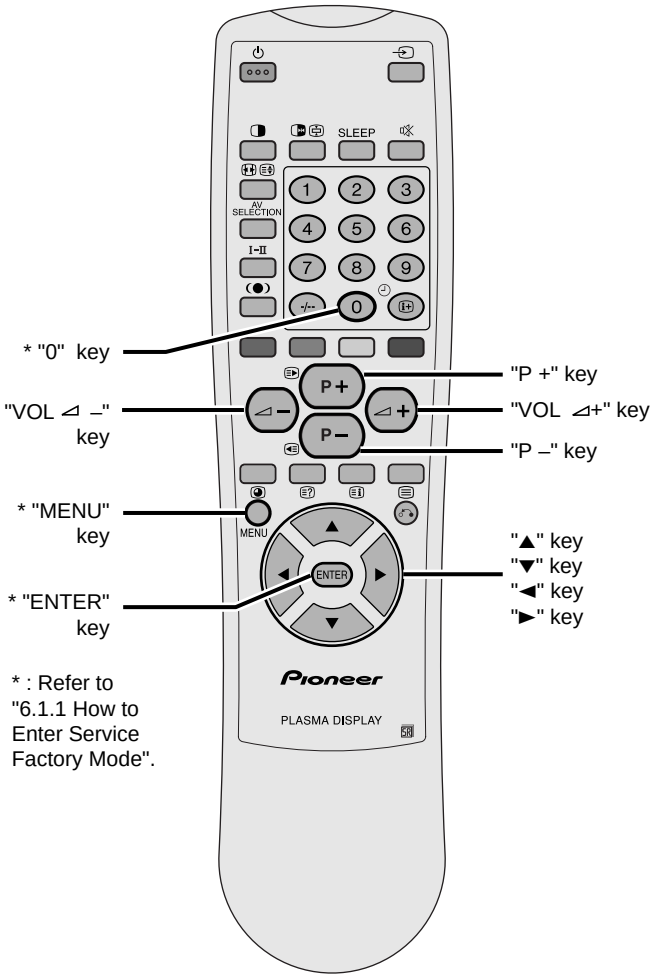
6.1 SERVICE FACTORY MODE

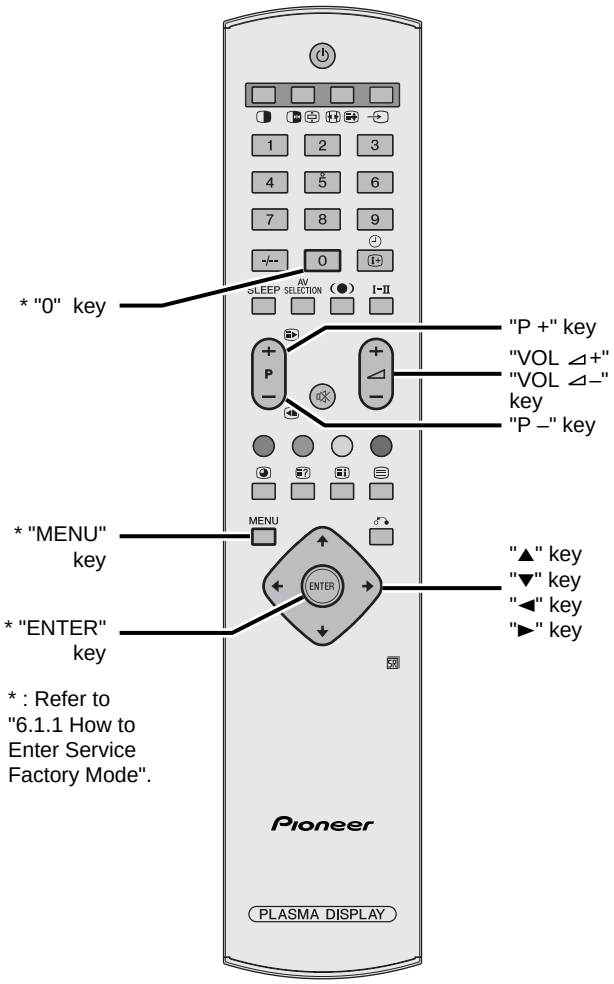
Service factory mode uses an OSD function of the Media Receiver (PDP-R03E, PDP-R03U or PDP-R03G).
Perform the adjustment and setting when the Media Receiver is connected with this unit.
Service Factory mode cannot be used if the Media Receiver is not connected with the Plasma Display.

■ Remote Control Unit Operation in The Service Factory Mode

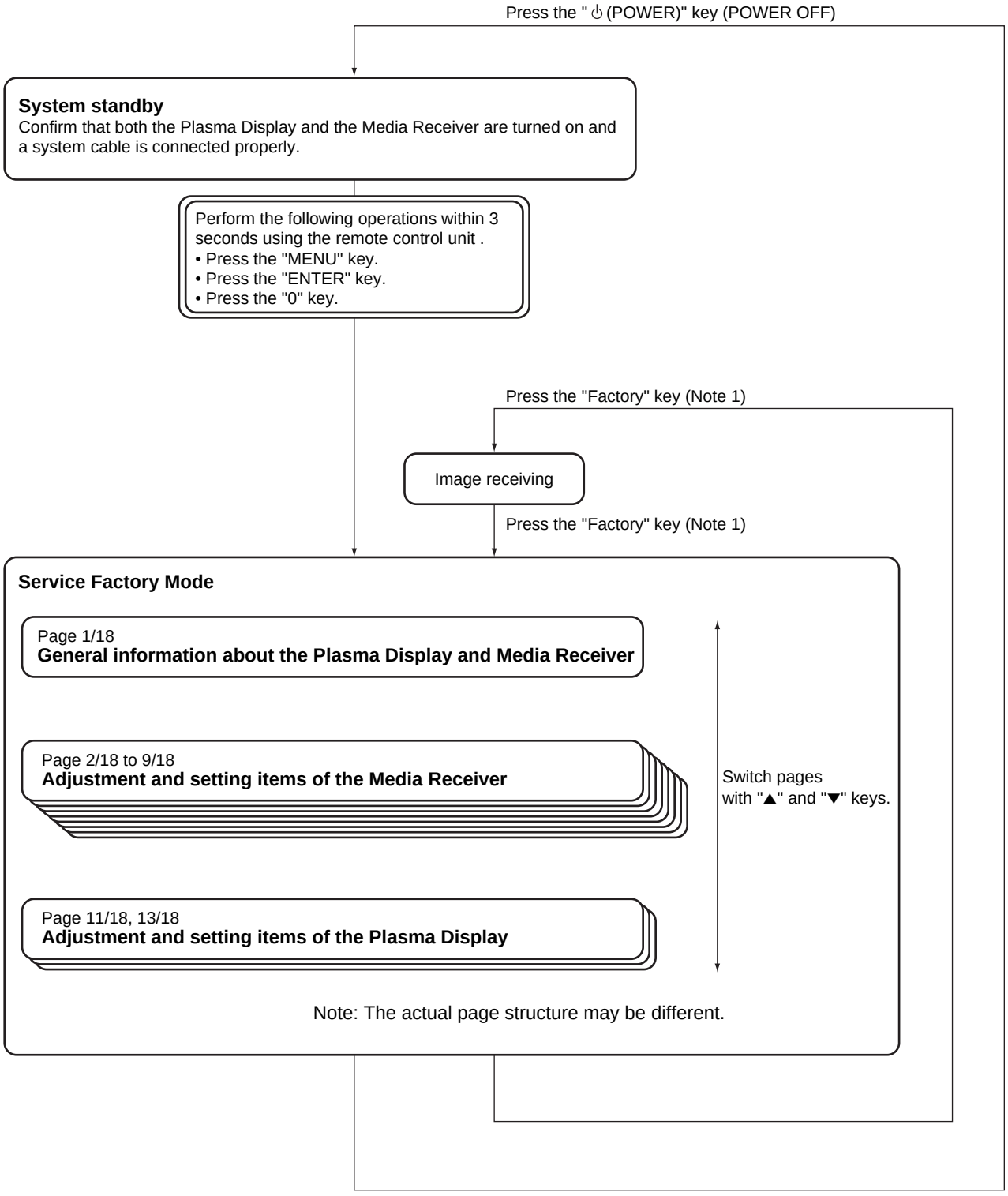
Operate the service factory mode with the remote control unit (AXD1463, AXD1460 or AXD1471) supplied with the Media Receiver.
Please perform the adjustment using the following keys.

Keys on the Remote Control Unit	Functions
P + key	Each press of the key moves the adjustment-item-selection cursor up by one line.
P – key	Each press of the key moves the adjustment-item-selection cursor down by one line.
VOL ◿ + key	Each press of the key increases the adjustment value by one.
VOL ◿ – key	Each press of the key decreases the adjustment value by one.
▲ key	Each press of the key moves one page backward (previous page).
▼ key	Each press of the key moves one page forward (next page).
◄ key	Each press of the key decreases the adjustment value by 10.
► key	Each press of the key increases the adjustment value by 10.





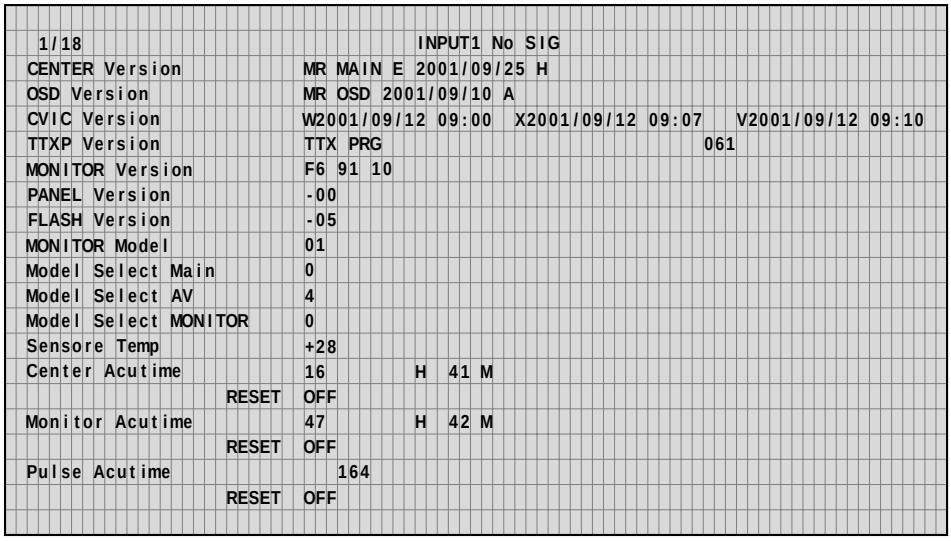
6.1.1 How to Enter the Service Factory Mode


Press the " ⏻ (POWER)" key (POWER OFF)
System standby
Confirm that both the Plasma Display and the Media Receiver are turned on and a system cable is connected properly.
Perform the following operations within 3 seconds using the remote control unit .
• Press the "MENU" key.
• Press the "ENTER" key.
• Press the "0" key.
Press the "Factory" key (Note 1)
Image receiving
Press the "Factory" key (Note 1)
Service Factory Mode
Page 1/18
General information about the Plasma Display and Media Receiver
Page 2/18 to 9/18
Adjustment and setting items of the Media Receiver
Switch pages with "▲" and "▼" keys.
Page 11/18, 13/18
Adjustment and setting items of the Plasma Display
Note: The actual page structure may be different.

Note 1: If the remote control unit for adjustment with the factory (AA5F) code is used.

6.1.2 General Information about the Plasma Display and Media Receiver

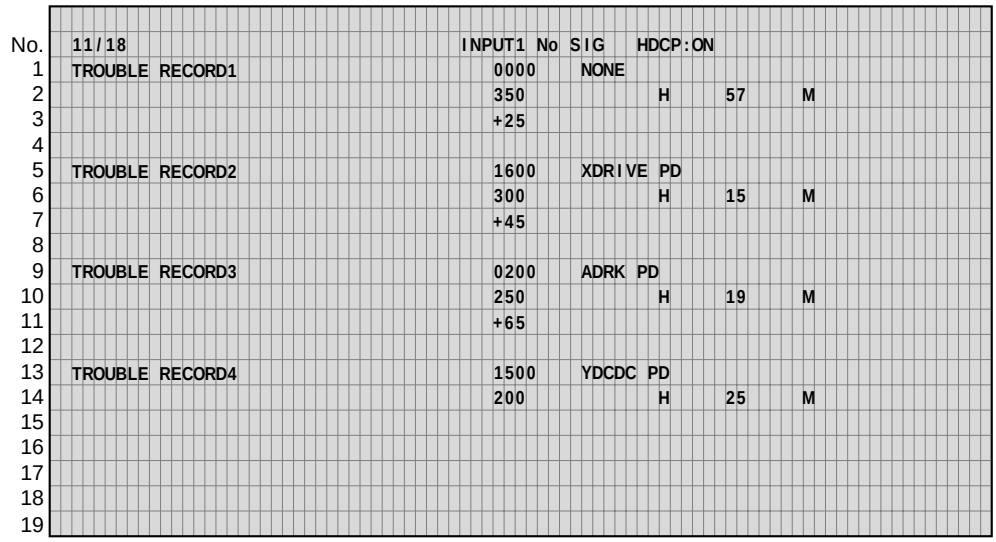
- **Display example of the first page**


No.
1/18 INPUT1 No SIG
1 CENTER Version MR MAIN E 2001/09/25 H
2 OSD Version MR OSD 2001/09/10 A
3 CVIC Version W2001/09/12 09:00 X2001/09/12 09:07 V2001/09/12 09:10
4 TTXP Version TTX PRG 061
5 MONITOR Version F6 91 10
6 PANEL Version -00
7 FLASH Version -05
8 MONITOR Model 01
9 Model Select Main 0
10 Model Select AV 4
11 Model Select MONITOR 0
12 Sensore Temp +28
13 Center Acutime 16 H 41 M
14 RESET OFF
15 Monitor Acutime 47 H 42 M
16 RESET OFF
17 Pulse Acutime 164
18 RESET OFF

No.	1/18	Item	Explanation
1	CENTER Version	Main software version information of the media receiver	
2	OSD version	OSD version information of the media receiver	
3	CVIC Version	IP/resize IC control software version information of the media receiver	
4	TTXP Version	Text microcomputer software version information of the media receiver	
5	MONITOR Version	Module microcomputer software version information of the PDP	
6	PANEL Version	Panel microcomputer version information of the PDP	Reference
7	FLASH Version	Panel flash ROM version information of the PDP	
8	MONITOR model	PDP model information	01: PIONEER 50 inches, 02: PIONEER 43 inches, 11: SHARP 50 inches, 12: SHARP 43 inches
9	Model Select Main	Media receiver model information	
10	Model Select AV	Media receiver model information	
11	Model Select MONITOR	PDP destination information	0: All SHARP destinations, Japanese and North America destinations of PIONEER, 3: European and general destinations of PIONEER
12	Sensor Temp	Temperature information of panel temperature sensor on the PDP	This is internal temperature information. This is not an environmental temperature.
13	Center Acutime	Media receiver accumulation operating time	
14	RESET	Media receiver accumulation operating time reset	Turn the display on by pressing the VOL+ key, then press the ENTER key. The accumulated time will be reset to zero.
15	Monitor Acutime	PDP accumulation operating time	
16	RESET	PDP accumulation operating time reset	Turn the display on by pressing the VOL+ key, then press the ENTER key. The accumulated time will be reset to zero.
17	Pulse Acutime	PDP accumulation pulse number	Real accumulation pulse number becomes "indicated value *10,000,000 pulse".
18	RESET	PDP accumulation pulse number reset	Turn the display on by pressing the VOL+ key, then press the ENTER key. The accumulated number will be reset to zero.

Note: The actual page structure may be different.

● **Display example of the eleventh page**



No.	11/18	Item	Explanation
1	TROUBLE RECORD1	The latest PD record in the PD history	Disregard the first four-digit number. Following this number, the information on PD is displayed.
2		Accumulated operating time of the panel when Trouble Record 1 occured	H : hour , M : minute
3		Temperature at the internal thermal sensor when Trouble Record 1 occured	Maximum temperature to be displayed : +94°C
4			
5	TROUBLE RECORD2	The second latest PD record in the PD history	Disregard the first four-digit number. Following this number, the information on PD is displayed.
6		Accumulated operating time of the panel when Trouble Record 2 occured	H : hour , M : minute
7		Temperature at the internal thermal sensor when Trouble Record 2 occured	Maximum temperature to be displayed : +94°C
8			
9	TROUBLE RECORD3	The third latest PD record in the PD history	Disregard the first four-digit number. Following this number, the information on PD is displayed.
10		Accumulated operating time of the panel when Trouble Record 3 occured	H : hour , M : minute
11		Temperature at the internal thermal sensor when Trouble Record 3 occured	Maximum temperature to be displayed : +94°C
12			
13	TROUBLE RECORD4	The fourth latest PD record in the PD history	Disregard the first four-digit number. Following this number, the information on PD is displayed.
14		Accumulated operating time of the panel when Trouble Record 4 occured	H : hour , M : minute
15		Temperature at the internal thermal sensor when Trouble Record 4 occured	Maximum temperature to be displayed : +94°C

NOTE : The failure point of a PD, corresponding to the number of blinks of the Red LED, is indicated in the PD records as follows:

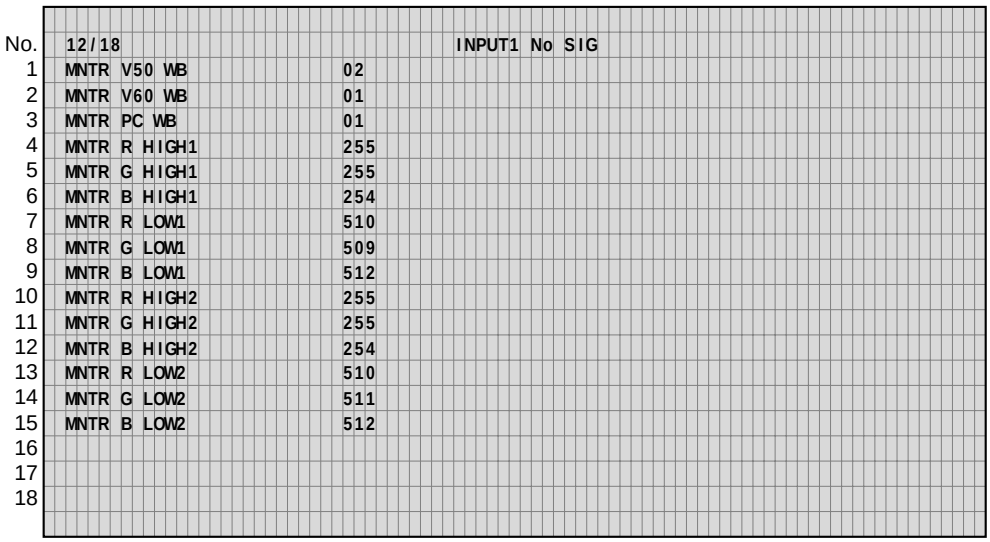
Number of blinks	Item	Past record dislay
1	Y-DRIVE	Y-DRIVE PD
2	Y-DC/DC CONVERTER	Y-DC/DC PD
3	X-DC/DC CONVERTER	X-DC/DC PD
4	X-DRIVE	X-DRIVE PD
5	Power supply	0000 NONE *1
6	Address junction	ADR PD
7	Address resonance	ADRK PD
8	DIGITAL-DC/DC CONVERTER	DCC PD

Note: The actual page structure may be different.

NOTE1:
A PD record representing 5 blinks of the Red LED (a PD of the power-supply section) must display "0000 NONE", accumulated time and temperature together. If only "0000 NONE" is displayed, but the accumulated time and temperature are zero, it means there was no PD.
If "0000 NONE"is displayed and the internal thermal sensor temperature is 78°C or more, it represents a record of a shutdown (SD) prompted by the abnormal temperature (indicated by 4 blinks of the Green LED), and not a record of a PD of the power-supply section.

6.1.3 Adjustment and Setting Item of the Plasma Display

● Display example of the eleventh page

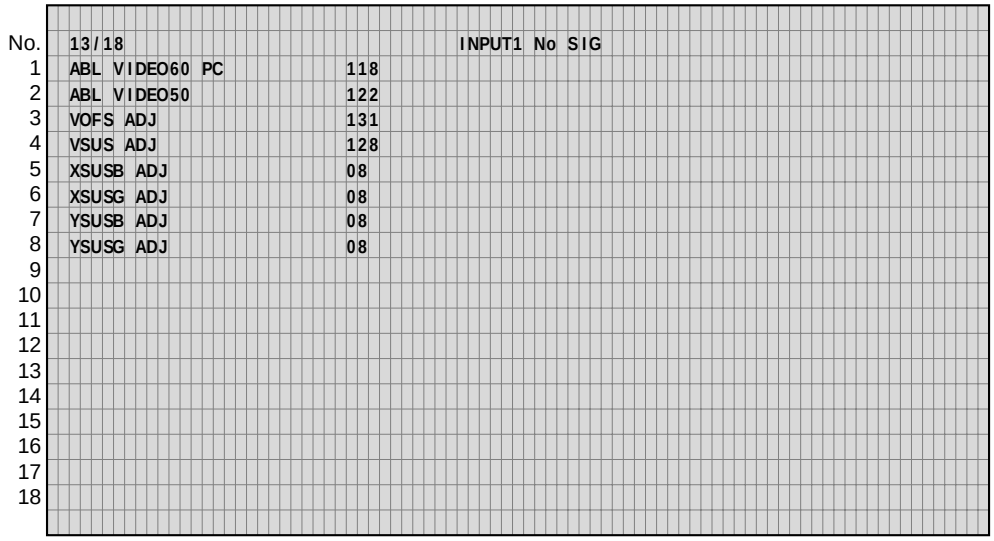

No.
12/18
INPUT1 No SIG
1 MNTR V50 WB 02
2 MNTR V60 WB 01
3 MNTR PC WB 01
4 MNTR R HIGH1 255
5 MNTR G HIGH1 255
6 MNTR B HIGH1 254
7 MNTR R LOW1 510
8 MNTR G LOW1 509
9 MNTR B LOW1 512
10 MNTR R HIGH2 255
11 MNTR G HIGH2 255
12 MNTR B HIGH2 254
13 MNTR R LOW2 510
14 MNTR G LOW2 511
15 MNTR B LOW2 512
16
17
18

No.	12/18	Item	Adjustable Range	Factory Setting	Storage Place
1	MNTR V50 WB	PDP_W/B table selection at VIDEO 50Hz	1 or 2	2	PDP
2	MNTR V60 WB	PDP_W/B table selection at VIDEO 60Hz	1 or 2	1	PDP
3	MNTR PC WB	PDP_W/B table selection at PC	1 or 2	1	PDP
4	MNTR R HIGH1	RED_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
5	MNTR G HIGH1	GREEN_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
6	MNTR B HIGH1	BLUE_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
7	MNTR R LOW1	RED_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
8	MNTR G LOW1	GREEN_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
9	MNTR B LOW1	BLUE_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
10	MNTR R HIGH2	RED_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
11	MNTR G HIGH2	GREEN_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
12	MNTR B HIGH2	BLUE_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
13	MNTR R LOW2	RED_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP
14	MNTR G LOW2	GREEN_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP
15	MNTR B LOW2	BLUE_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP

Note on PDP W/B (No. 4 to 15) adjustment:
During adjustment, the value being adjusted is valid regardless of the actual input signal. For example, if the settings for the table selections (No. 1 and 2) remain at the factory preset settings, even if a PAL signal is being input, while [MNTR R HIGH1] is adjusted, the value in W/B table 1 is adjusted even if a PAL signal is being displayed.
After adjustment, if the PDP is restarted in the normal mode, the value in W/B table 2 will be used during PAL signal input, and the value in W/B table 1 will be used during NTSC signal input.

Note: The actual page structure may be different.

● **Display example of the thirteenth page (1/2)**



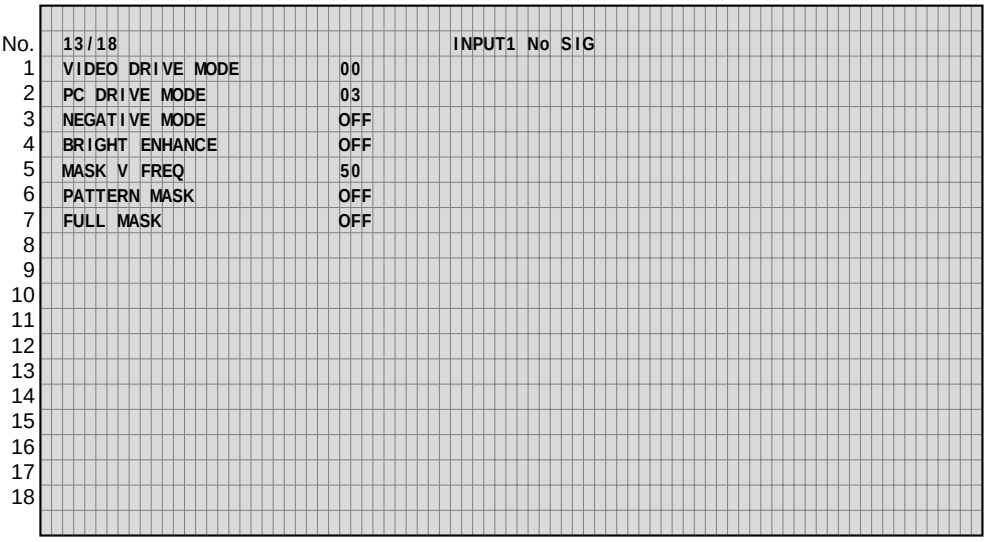
No.	13/18	Item	Adjustable Range	Factory Setting	Storage Place
1	ABL VIDEO60 PC	Electric power setting at the PC, VIDEO 60Hz	0 to 255	Factory adjustment value	PDP
2	ABL VIDEO50	Electric power setting at VIDEO 50Hz	0 to 255	Factory adjustment value	PDP
3	VOFS ADJ	VOFS voltage setting	0 to 255	Factory adjustment value	PDP
4	VSUS ADJ	VSUS voltage setting	0 to 255	Factory adjustment value	PDP
5	XSUSB ADJ	SUS_B timing setting of X drive	0 to 15	Factory adjustment value	PDP
6	XSUSG ADJ	SUS_G timing setting of X drive	0 to 15	Factory adjustment value	PDP
7	YSUSB ADJ	SUS_B timing setting of Y drive	0 to 15	Factory adjustment value	PDP
8	YSUSG ADJ	SUS_G timing setting of Y drive	0 to 15	Factory adjustment value	PDP

If you fail to correctly adjust the above items 1 to 8, the unit may be damaged. Be very careful when making adjustments.

Note on the electric-power-setting adjustment (No. 1 and 2):
During adjustment, the value being adjusted is valid regardless of the actual input signal. For example, even if a PAL signal is being input, while [ABL VIDEO60 PC] is adjusted, the value for the [ABL VIDEO60 PC] is adjusted even if a PAL signal is being displayed.
After the adjustment, if the PDP is restarted in the normal mode, the unit will operate on [ABL VIDEO50] during PAL signal input, and on [ABL VIDEO60 PC] using your adjusted values during NTSC signal input.

Note: The actual page structure may be different.

● Display example of the thirteenth page (2/2)



No.	13/18	Item	Adjustable Range	Factory Setting	Storage Place
1	VIDEO DRIVE MODE	Drive mode selection at VIDEO	0 to 5	0	PDP
2	PC DRIVE MODE	Drive mode selection at PC	0 to 5	3	PDP
3	NEGATIVE MODE	Negative positive inversion mode	OFF/ON	OFF	PDP
4	BRIGHT ENHANCE	Bright enhance	OFF/ON	OFF	None
5	MASK V FREQ	Refresh rate at mask signal generation	50/60/70	–	None
6	PATTERN MASK	Pattern mask signal generation	OFF/	OFF	PDP
7	FULL MASK	Full mask signal generation	OFF/	OFF	PDP

Notes when using the mask signals (test signals generated inside the PDP):

- Either the pattern-mask signal or the full-mask signal can be used. Therefore, when the pattern-mask signal is to be used, set the full-mask signal to OFF, and when the full-mask signal is to be used, set the pattern-mask signal to OFF.
- As the pattern-mask and full-mask signals are both test signals generated from inside the PDP, while either of the signals is being generated, OSD signals or external video input signals cannot be checked.
  Use the buttons on the main unit or the keys on the remote control unit for releasing a mask setting, changing each setting, adjustment, or checking external input signals. For 2 seconds after any operation is performed using the buttons on the main unit or the keys on the remote control unit, generation of a mask signal is stopped. During this period, it is possible to change any setting, make any adjustment, or check an external input signal.

Note: The actual page structure may be different.

6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ SW POWER SUPPLY Module

● When replaced

No adjustment required.

■ DIGITAL VIDEO Assy

● When repaired

No adjustment required.

● When replaced

• Remove IC1204 (24LC04(1) SN-TBB) from the former PC Board and install it to the new PC Board.

■ MR INTERFACE Assy

• Set the slide SW referring to the table on page 22.

■ Y DRIVE Assy

● When repaired

Note: If the Pulse Module fails, it is not possible to repair the Y DRIVE Assy by replacing only the Pulse Module. Replace the entire Y DRIVE Assy.

1. VOFS/VH/IC5V voltage adjustment

● When replaced

1. Panel white balance adjustment

■ X DRIVE Assy

● When repaired

Note: If the Pulse Module fails, it is not possible to repair the X DRIVE Assy by replacing only the Pulse Module. Replace the entire X DRIVE Assy.

1. VRN voltage adjustment

● When replaced

1. Panel white balance adjustment

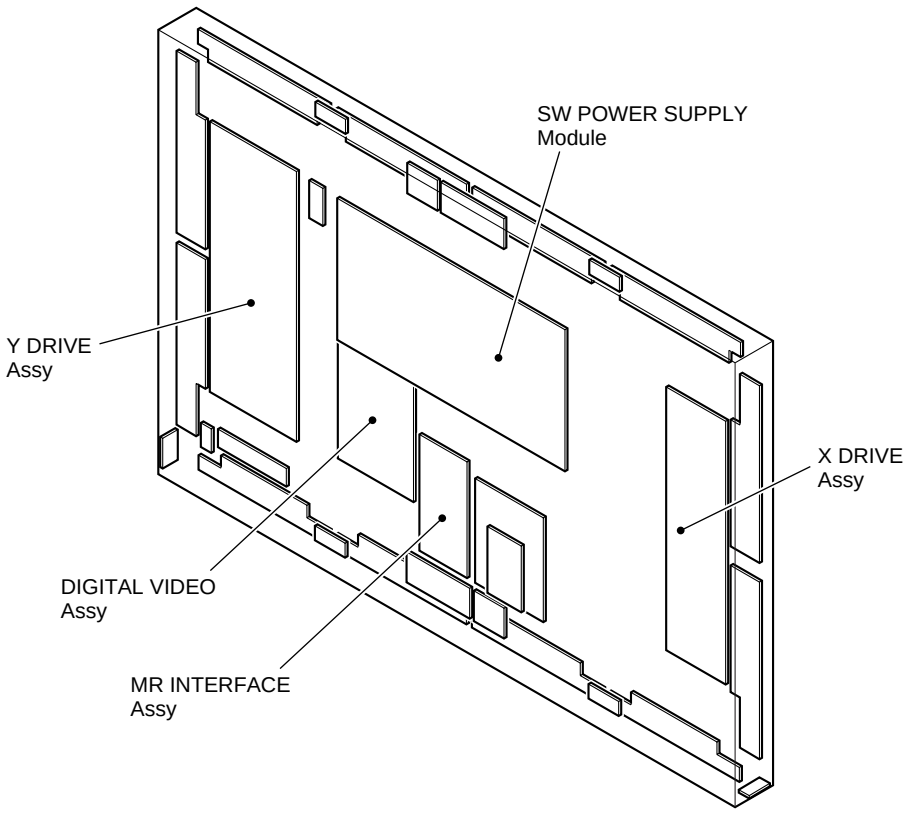


Fig. 1 Configuration of the PC Board (rear side view)

6.3 ADJUSTMENT

■ VOFS/VH/IC5V Voltage Adjustment

<table>
<tr><th>Input Signal</th><th>Adjusting Point</th><th>Adjusting Method</th></tr>
<tr><td rowspan="4">White 100%</td><td>VR2701 (VOFS)
(Y DRIVE Assy)</td><td>
VOFS (Offset voltage) adjustment
Method 1
1. Make a note of the adjustment value of VOFS ADJ in factory mode.
2. Set the VOFS ADJ adjustment value to center (128).
3. Turn the VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes 45V.
4. Return the VOFS ADJ adjustment value to that which you wrote down in Step 1.

Method 2
1. Read the adjustment value of VOFS ADJ in the factory mode.
2. Turn the VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes the corresponding value indicated in the table below (tolerance: ± 5):

<table>
<tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr>
<tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr>
<tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr>
<tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr>
<tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr>
<tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr>
<tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr>
<tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr>
<tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr>
<tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr>
<tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr>
<tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr>
<tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr>
<tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr>
<tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr>
<tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr>
<tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr>
<tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr>
<tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr>
<tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr>
<tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr>
<tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr>
</table>
Signs of improper adjustment
If the VOFS Voltage adjustment is not performed properly, blinking luminance points like dots appear. If the voltage deviates greatly from the right adjustment point, the panel will turn white when lit.
</td></tr>
<tr><td>VR2703 (VH)
(Y DRIVE Assy)</td><td>
VH (voltage for the scan IC) Adjustment
Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes 130V ± 0.5V. PSUS (=GNDH) is a floating GND and its electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.

Signs of improper adjustment
If the VH adjustment is not performed properly, blinking luminance points like dots appear. If the voltage is deviated greatly from the right adjustment point, the panel will lturn white when lit.
</td></tr>
<tr><td>VR2702 (IC5V)
(Y DRIVE Assy)</td><td>
IC5V Adjustment
Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes 5.0V ± 0.1V. PSUS (=GNDH) is a floating GND and its electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.
</td></tr>
<tr><td colspan="2">Note : Be sure to measure between specified test points.</td></tr>
</table>

■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode XSUSB ADJ YSUSB ADJ	**X-SUS-B, Y-SUS-B Adjustment** Set to the indicated value with the remote control unit.

■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	**VRN (minus reset voltage adjustment)** Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes –280V ± 1.0V.

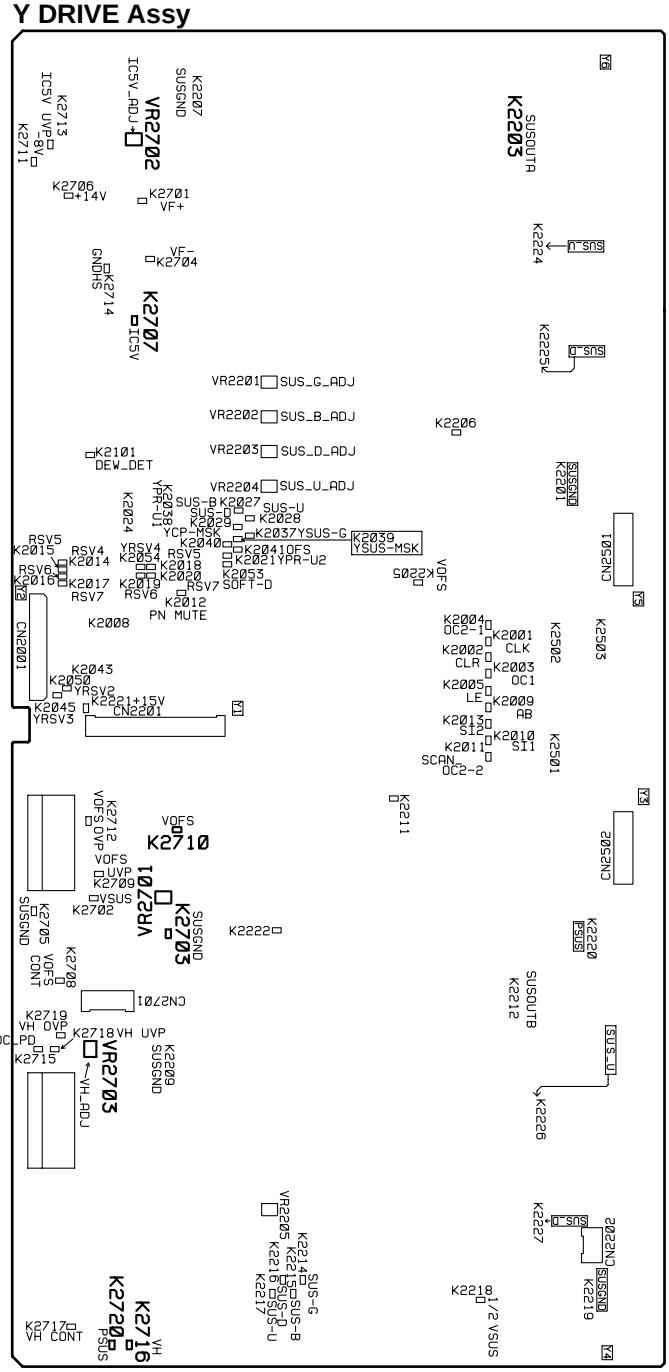
■ Panel White Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method
		Adjust the OFFSET-DIGITAL parameters (from PANEL R-HIGH to PANEL B-LOW) in Factory mode. For adjustment, use the mask (MASK04) signal of Factory mode for display. Reference : Adjustment values when using the Minolta color-difference meter (A-100)

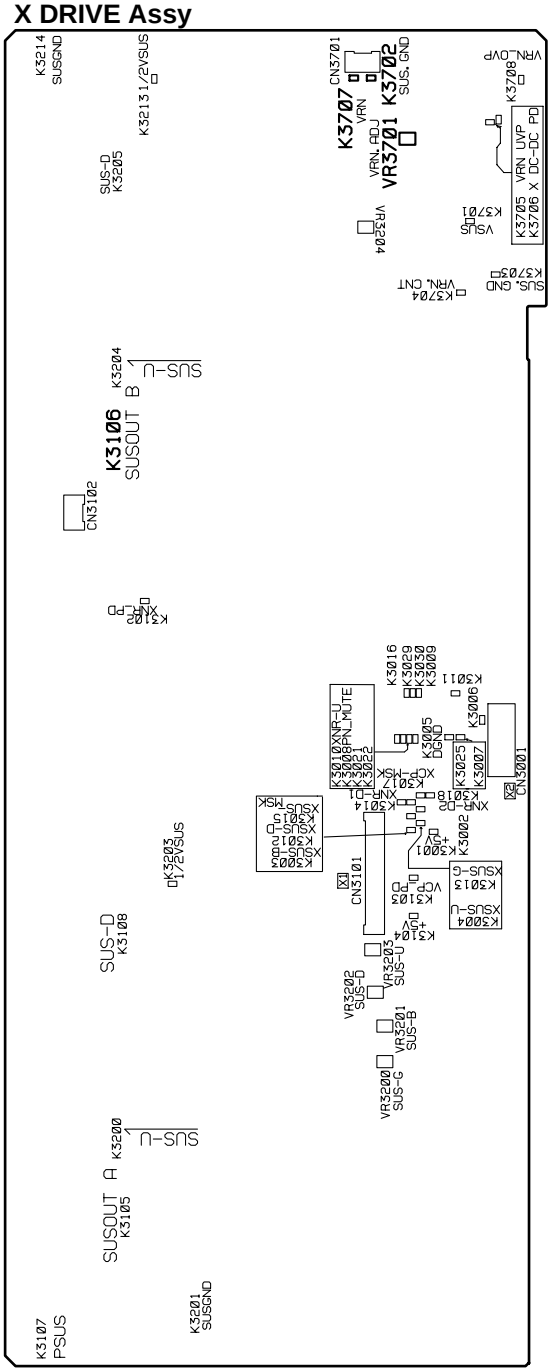
	MASK Left Side	MASK Right Side
x	293	292
y	308	296

Note: If you perform various adjustments with the RS-232C commands, be sure to execute a "DM0" command (releasing the pulse number limit) first, and after completion of the adjustment, be sure to execute a "DM3" command (pulse number limit: 64%, factory preset value).

Y DRIVE Assy



X DRIVE Assy



Adjusting Points

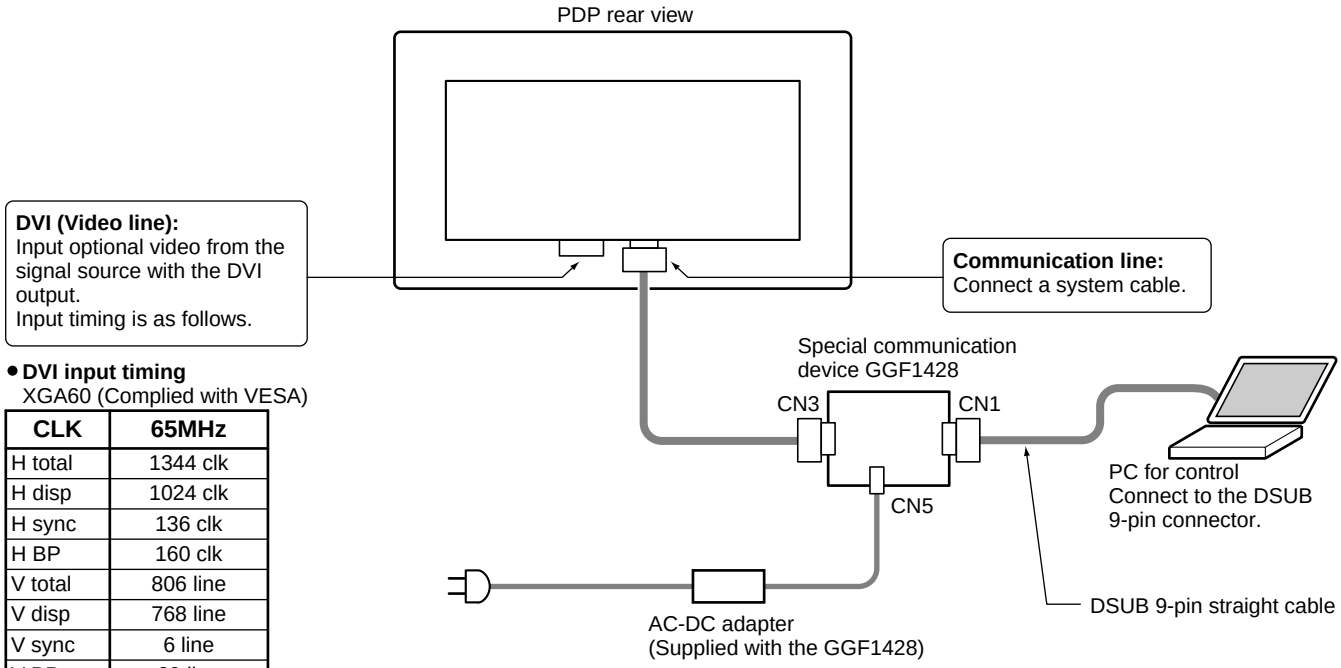
6.4 COMMANDS

6.4.1 RS-232C Commands

The panel control items for the PDP-433PU, PE and PG system can be controlled with the RS-232C commands by connecting a PC through a special communication device GGF1428 when the Media Receiver is not connected with the PDP.

Note: The DSUB (9-pin) connector at the rear of the Media Receiver cannot be used.

■ Connection



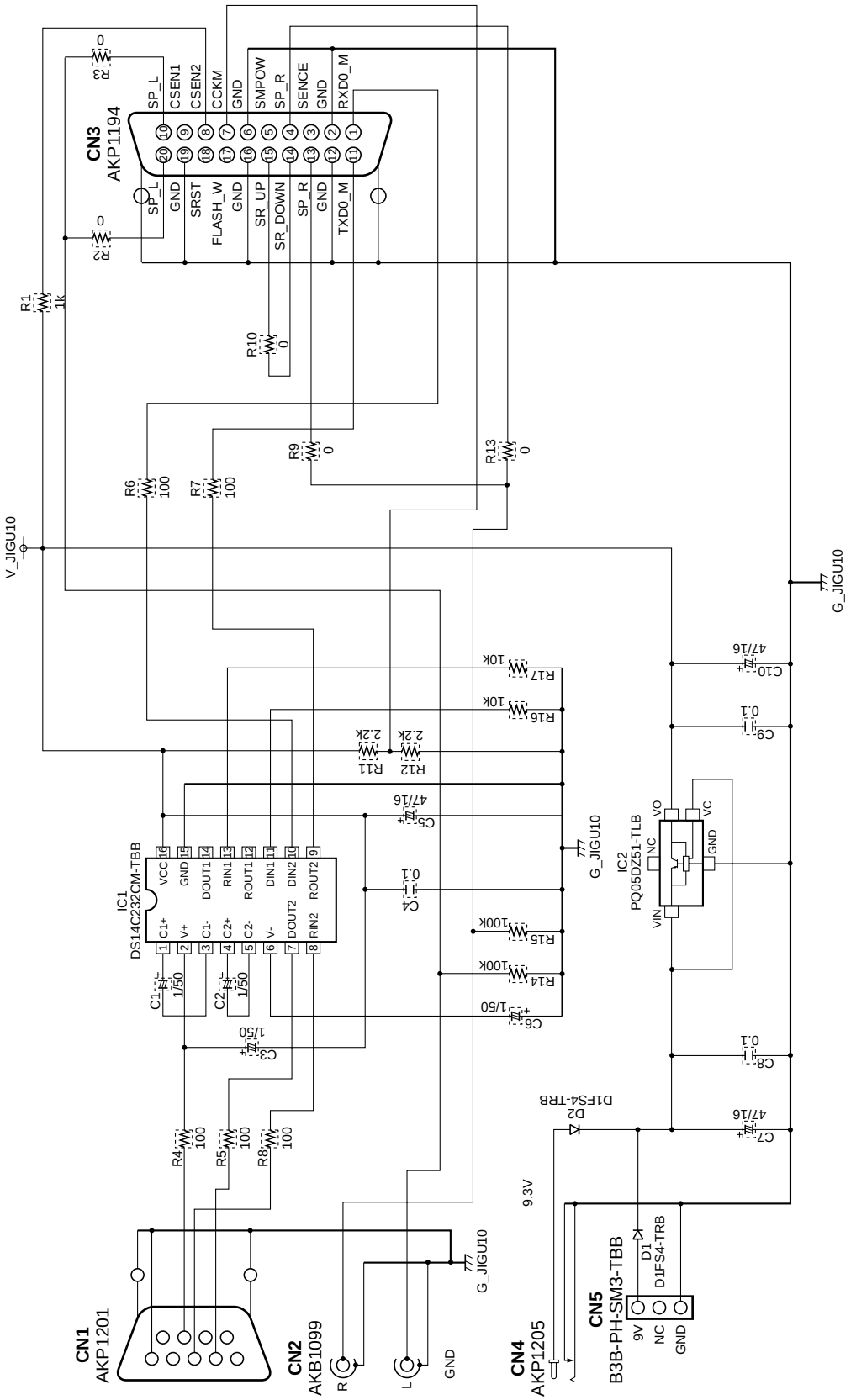
● **DVI input timing**
XGA60 (Complied with VESA)

CLK	65MHz
H total	1344 clk
H disp	1024 clk
H sync	136 clk
H BP	160 clk
V total	806 line
V disp	768 line
V sync	6 line
V BP	29 line
fH	48.363 kHz
fV	60.004 Hz

■ Communication baud rate

Fixed to 38400 bps.

Schematic Diagram of the special communication device



RS-232C Commands when the Media Receiver is not connected with the PDP

Command	Name	Function	Direct Validity	UP/DOWN Validity	Lower Limit	Upper Limit
AB0	ABL REFERENCE MODE	Setting the ABL to reference value				
AB1	ABL OFFSET MODE 1	Setting the ABL to offset value 1				
AB2	ABL OFFSET MODE 2	Setting the ABL to offset value 2				
AB3	ABL OFFSET MODE 3	Setting the ABL to offset value 3				
ABL	ABL ADJUST	Adjusting the upper limit of the power	O	O	000	255
AMN	AUDIO MUTE OFF	Mute off request of speaker volume				
AMY	AUDIO MUTE ON	Mute request of speaker volume				
DRF	DRIVE OFF	Drive OFF				
DRN	DRIVE ON	Drive ON				
DW0	DOWN 0	Lowering the adjustment value by 10				
DWF	DOWN FULL	Minimizing the adjustment value				
DWn	DOWN n	Lowering the adjustment value by n				
EWN	EEPROM WRITE NO	Completing the plug & play EEPROM writing mode				
EWY	EEPROM WRITE YES	Starting the plug & play EEPROM writing mode				
F50	FREE RUN 50VIDEO	Displaying the mask screen with 50Hz (video) sequence				
F60	FREE RUN 60VIDEO	Displaying the mask screen with 60Hz (video) sequence				
F61	FREE RUN 60PC	Displaying the mask screen with 60Hz (PC) sequence				
F70	FREE RUN 70PC	Displaying the mask screen with 70Hz (PC) sequence				
GAJ *	GET ADJUST	Acquiring the various adjustment value of the display				
GPW *	GET PANEL W/B	Acquiring the W/B adjustment value of the panel				
GS1 *	GET STATUS 1	Acquiring the version information				
HMS	HOUR METER SET	Setting hour meter to optional time				
M00	MASK 00	Mask mode OFF				
M01	MASK 01	Pattern 1 (Lamps)				
M02	MASK 02	Pattern 2 (Color bars)				
M03	MASK 03	Pattern 3 (Slanting lines)				
M04	MASK 04	Pattern 4 (W/B measurement)				
M05	MASK 05	Pattern 5 (W/B adjustment)				
M06	MASK 06	Pattern 6 (W/B peak measurement)				
M07	MASK 07	Pattern 7 (Peak measurement)				
M08	MASK 08	Pattern 8 (Reservation)				
M09	MASK 09	Pattern 9 (SCAN IC protection test)				
M10	MASK 10	Pattern 10 (SCAN IC protection test)				
M11	MASK 11	Pattern 11 (reservation)				
M12	MASK 12	Pattern 12 (reservation)				
M13	MASK 13	Pattern 13 (reservation)				
M14	MASK 14	Pattern 14 (reservation)				
M51	MASK 51	Full mask (white)				
M52	MASK 52	Full mask (cyan 274)				
M53	MASK 53	Full mask (magenta 1023)				
M54	MASK 54	Full mask (flesh color)				
M55	MASK 55	Full mask (cyan 1023)				
M56	MASK 56	Full mask (light purple)				
M57	MASK 57	Full mask (sky blue)				
M58	MASK 58	Full mask (red)				
M59	MASK 59	Full mask (green)				
M60	MASK 60	Full mask (blue)				
M61	MASK 61	Full mask (black)				
M62	MASK 62	Full mask (red 779)				
M63	MASK 63	Full mask (cyan 218)				
M64	MASK 64	Full mask (cyan 444)				
M65	MASK 65	Full mask (flesh color 43)				
M66	MASK 66	Full mask (red 620)				
M67	MASK 67	Full mask (magenta 98)				
M68	MASK 68	Full mask (sky blue 1_43)				

* See "6. 4. 2 GET Commands".

RS-232C Commands when the Media Receiver is not connected with the PDP

Comman	Name	Function	Direct Validity	UP/DOWN Validity	Lower Limit	Upper Limit
M69	MASK 69	Full mask (sky blue 2_43)				
M70	MASK 70	Full mask (light purple 43)				
M71	MASK 71	Full mask (yellow)				
M72	MASK 72	Full mask (blue 916)				
M73	MASK 73	Full mask (reservation)				
M74	MASK 74	Full mask (reservation)				
MMN	MIRROR MODE NO	Mirror mode OFF (normal display)				
MMX	MIRROR MODE X	Right and left reversing display				
MMY	MIRROR MODE Y	Top and bottom reversing display				
MMZ	MIRROR MODE XY	Top and bottom, right and left reversing display				
MTN	PANEL MUTE NO	Release panel mute				
MTY	PANEL MUTE YES	Panel mute				
NMN	NEGATIVE MODE NO	Negative-positive inversion mode OFF				
NMY	NEGATIVE MODE YES	Negative-positive inversion mode ON				
PBH	PANEL BLUE HIGH	BLUE HIGH LIGHT adjustment	O	O	000	255
PBL	PANEL BLUE LOW	BLUE LOW LIGHT adjustment	O	O	000	999
PGH	PANEL GREEN HIGH	GREEN HIGH LIGHT adjustment	O	O	000	255
PGL	PANEL GREEN LOW	GREEN LOW LIGHT adjustment	O	O	000	999
PHN	PANEL HIGHT-LIGHT NO	Releasing the W/B highlight maximum mode of the panel				
PHY	PANEL HIGHT-LIGHT YES	Setting the W/B highlight of the panel to maximum				
PLN	BRIGHT ENHANCE NO	Center brightness correction OFF				
PLY	BRIGHT ENHANCE YES	Center brightness correction ON				
PMS	PULSE METER SET	Optional setting of the pulse meter				
POF	POWER OFF	Standby request				
PON	POWER ON	Power ON request				
PRH	PANEL RED HIGH	RED HIGH LIGHT adjustment	O	O	000	255
PRL	PANEL RED LOW	RED LOW LIGHT adjustment	O	O	000	999
PCN	PC MODE NO	At the 60Hz input: VIDEO sequence selection				
PCY	PC MODE YES	At the 60Hz input: PC sequence selection				
PT0	PANEL COLOR TEMP 0	Set each temperature mode to 0 (REF)				
PT1	PANEL COLOR TEMP 1	Set each temperature mode to 1 (OFS1)				
PT2	PANEL COLOR TEMP 2	Set each temperature mode to 2 (OFS2)				
UP0	UP 0	Increasing the adjustment value by 10				
UPF	UP FULL	Maximizing the adjustment value				
UPn	UP n	Increasing the adjustment value by n				
VOF	VOFFSET ADJUST	Vofs adjustment	O	O	000	255
VOL	VOLUME	Volume	O	O	000	060
VSU	VSUS ADJUST	Vsus adjustment	O	O	000	255
XSB	XSUS B	X-SUS-B pulse adjustment	O	O	000	015
XSG	XSUS G	X-SUS-G pulse adjustment	O	O	000	015
YSB	YSUS B	Y-SUS-B pulse adjustment	O	O	000	015
YSG	YSUS G	Y-SUS-G pulse adjustment	O	O	000	015

6.4.2 GET Commands

● Command Description

Command	Function
GAJ	Outputting data for electronic-control-adjustment values and drive-system-adjustment values
GPW	Outputting data relating to the white-balance adjustment for the panel
GS1	Outputting data such as version information, and data from the hour meter and pulse meter

GAJ: Outputting data for electronic-control-adjustment values and drive-system-adjustment values

• Output the data according to the order and size of the table below.

Order	Data Contents		Size	Remarks
1	Setting mode of electric power upper limit value		3 byte	AB* (*: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Vsus adjustment value	(Reference data)	3 byte	
5	Vofs adjustment value	(Reference data)	3 byte	
6	V-SUS-B adjustment value	(Reference data)	3 byte	
7	V-SUS-G adjustment value	(Reference data)	3 byte	
8	Y-SUS-B adjustment value	(Reference data)	3 byte	
9	Y-SUS-G adjustment value	(Reference data)	3 byte	

(Note 1) : If data are output when Reference mode is selected, the same data as the reference data are output as the offset data.
(Note 2) : A checksum of 2 bytes is added at the end, but this can be ignored.

GPW: Outputting data relating to the white-balance adjustment for the panel

• Output the data according to the order and size of the table below.

Order	Data Contents		Size	Remarks
1	Panel color temperature mode		3 byte	PT* (*: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte	
5		(Offset data)	3 byte	(Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte	
7		(Offset data)	3 byte	(Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte	
9		(Offset data)	3 byte	(Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte	
11		(Offset data)	3 byte	(Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte	
13		(Offset data)	3 byte	(Note 1)

(Note 1) : If data are output when Reference mode is selected, the same data as the reference data are output as the offset data.
(Note 2) : A checksum of 2 bytes is added at the end, but this can be ignored.

GS1: Outputting data such as version information, and data from the hour meter and pulse meter

• Output the data according to the order and size of the table below.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (hour)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692 or F692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

Note: A checksum of 2 bytes is added at the end, but this can be ignored.

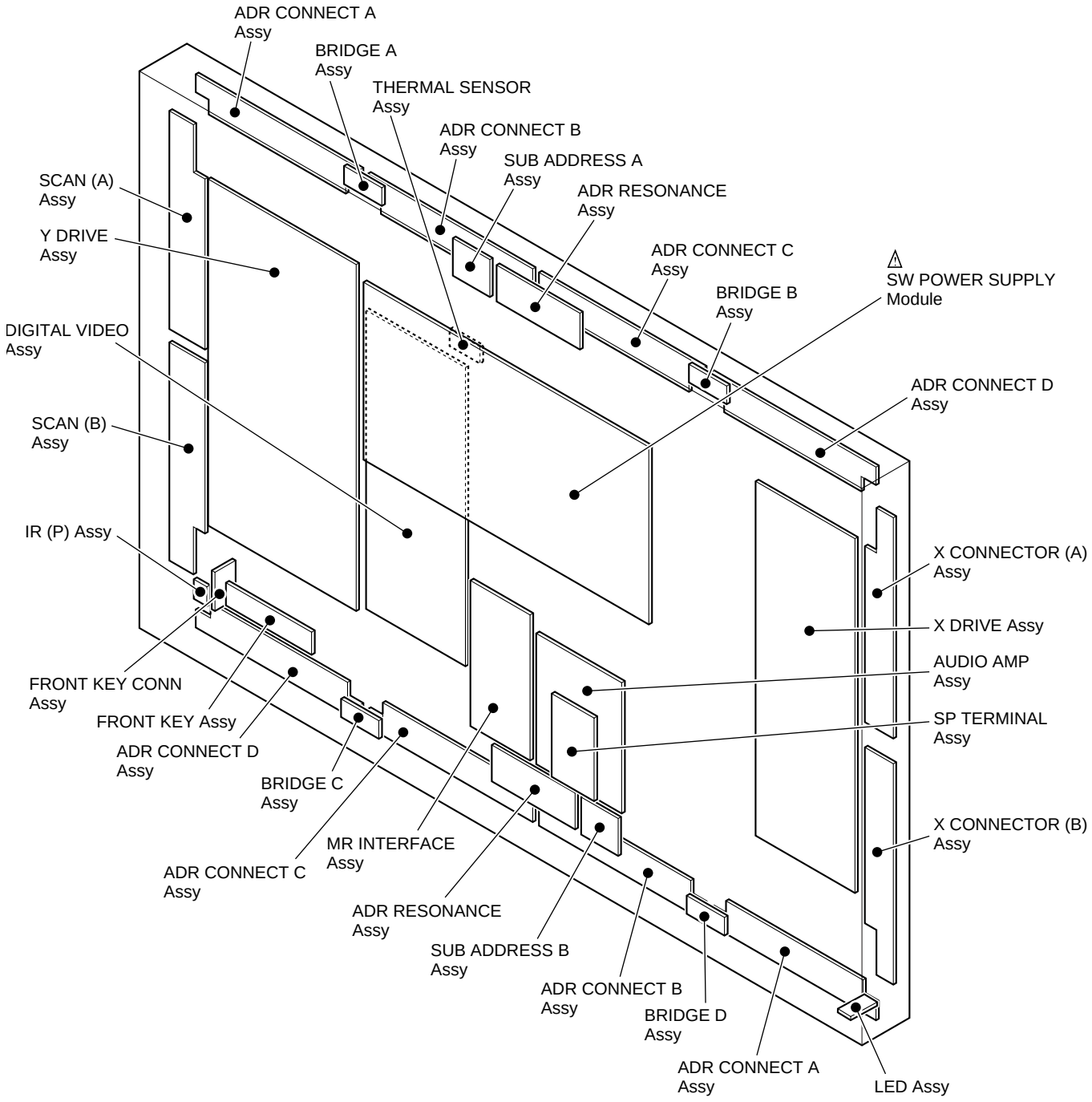
■ Display Information

Data	Model
MX5	PDP-503MX (initial value)
MX4	PDP-433MX
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 CONFIGRATION OF THE PC BOARD



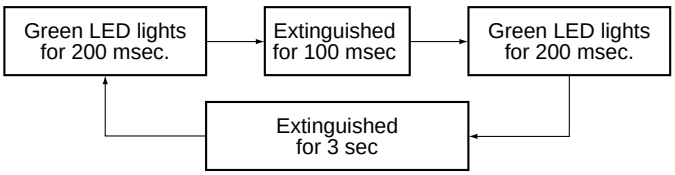
7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN DIAGNOSIS BY LED

This unit has self-diagnosis functions against abnormalities in the internal circuits and other operational abnormalities, and if any abnormality is detected, the STANDBY/ON indicator (LED) blinks to alert you of it.
How the indicator blinks and possible failure points and power-down points are explained below:

● Shutdown

• Operations : When a microcomputer has detected an abnormality, it turns the power supply to OFF.
• LED display : Blinking in green

Example: How the LED blinks when DIGITAL-IIC communications fail



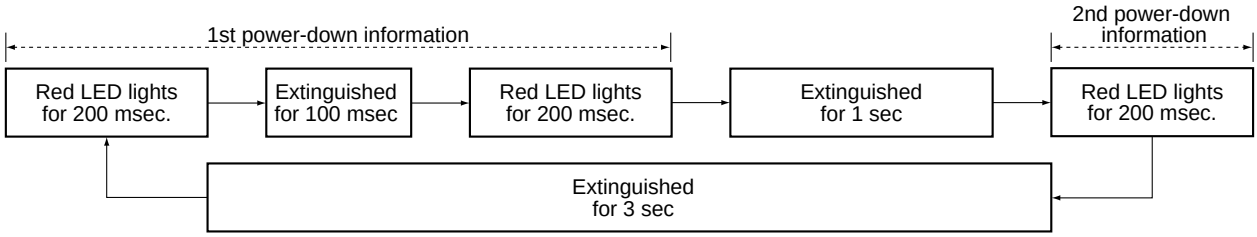
Number of blinking	Reason
1	Panel Microcomputer failure
2	DIGITAL-IIC communication failure
4	Temperature abnormality

How to release shutdown
Press the power key on the remote control to switch the unit back on.
(It is not necessary to press the MAIN POWER button to turn off the unit.)

● Power-down

• Operations : In an emergency, the protection circuits are activated, and the power is turned off.
• LED display : Blinking red
Note: If more than two protection circuits are activated at almost the same time, the LED indicates this by its blinking-pattern.

Example: How the LED blinks for the first power-down (Y-DC/DC CONVERTER) and the second power-down (Y DRIVE)

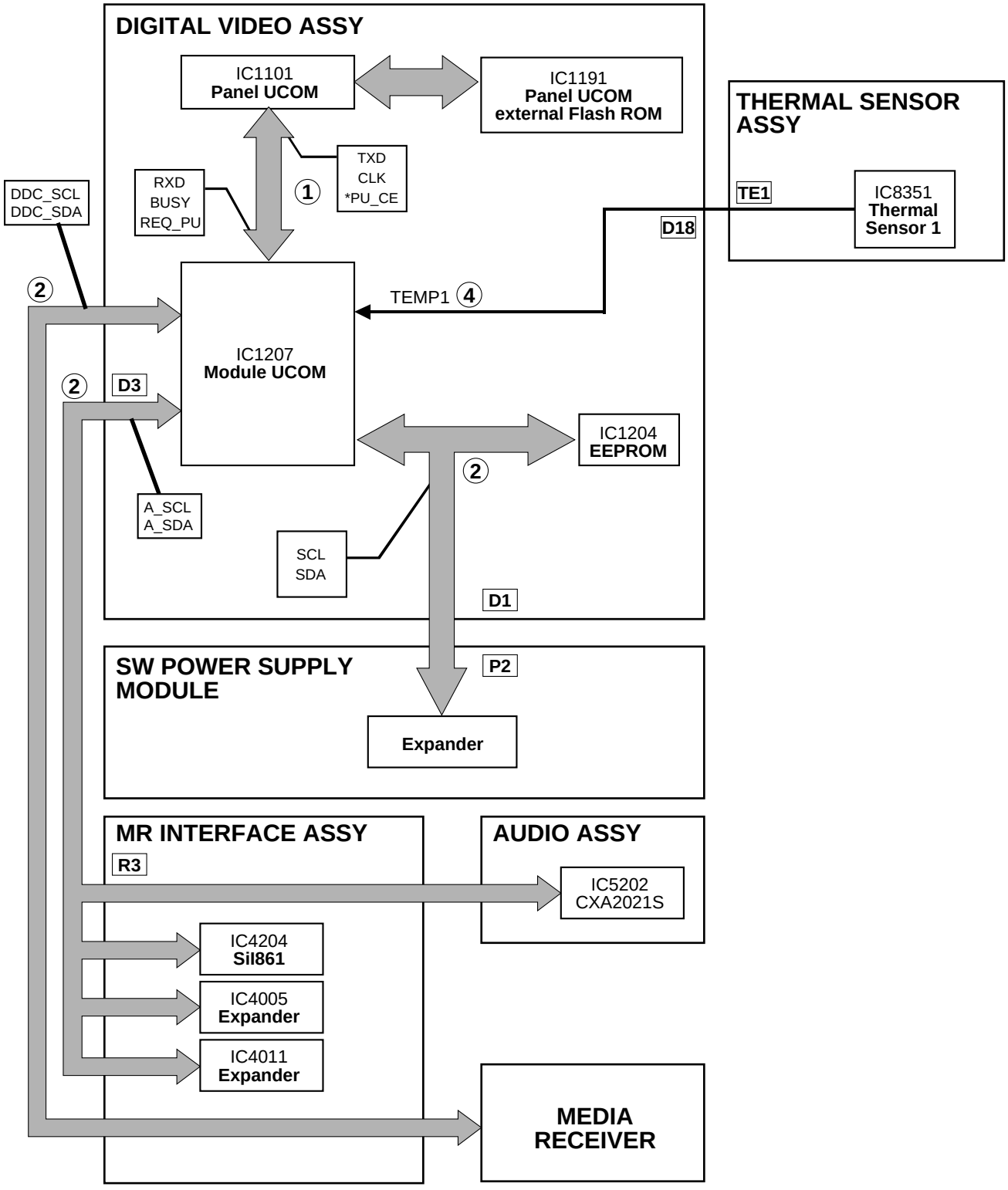

1st power-down information
2nd power-down information
Red LED lights for 200 msec.
Extinguished for 100 msec
Red LED lights for 200 msec.
Extinguished for 1 sec
Red LED lights for 200 msec.
Extinguished for 3 sec

Number of blinks	Failure Point
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

How to release power-down
Set the MAIN POWER button to OFF, and wait for about 30 seconds until the LED for PD (power-down) in the power-supply module is extinguished. Wait another 5 seconds, then recover the unit by setting the MAIN POWER button to ON.

Note: After power-down is released, the unit restarts and goes to Standby mode.

● **Block Diagram of the Shutdown Signal System ("STANDBY/ON" LED: Blinking in green)**



Note: The figures ① - ④ indicate the number of times the "STANDBY/ON" LED blinks when shutdown occurs in the corresponding route.

● Shutdown diagnosis

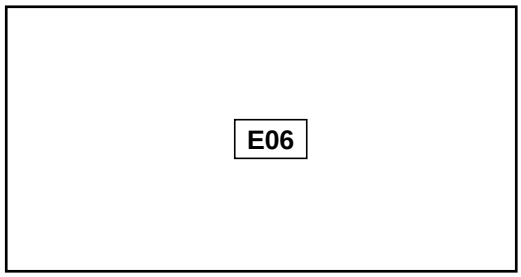
① Panel microcomputer failure

Condition : When a module microcomputer failed in communication with a panel microcomputer
Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Possible causes

• Open/short-circuit of the communication lines in the assembly

Screen display



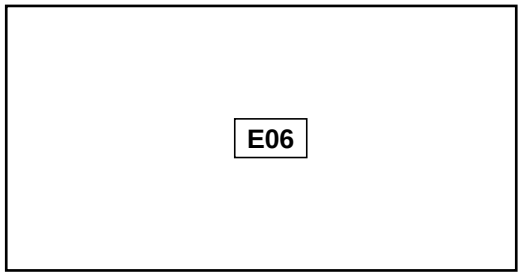
② DIGITAL-IIC communication failure

Condition : When a module microcomputer failed in communication with an external EEPROM or EXPANDER
Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Note: A DIGITAL-IIC communication failure may occur in Standby mode.

Possible causes

• Open / Short-circuit of communication line in the DIGITAL VIDEO, MR INTERFACE and AUDIO Assys
• Breaking of wire between the following points:
DIGITAL VIDEO Assy (D1) ↔ SW POWER SUPPLY Module (P2)
DIGITAL VIDEO Assy (D3) ↔ MR INTERFACE Assy (R3)
MR INTERFACE Assy (R23) ↔ AUDIO Assy (A24)
System Cable

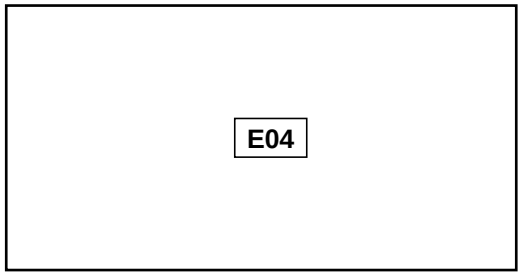


③ Abnormally high temperature

Condition : when the internal temperature of the unit becomes abnormally high
Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.
Note: If the internal temperature of the unit becomes lower while the OSD is displayed, the unit returns to normal operation.

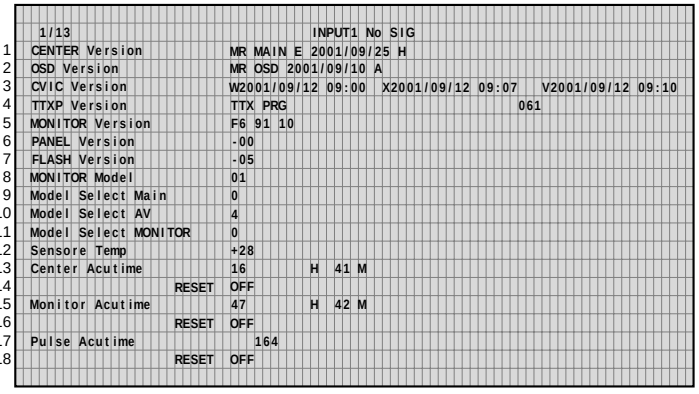
Possible causes if this abnormality occurs in an environment in which the temperature is not so high

Disconnection between the DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1)



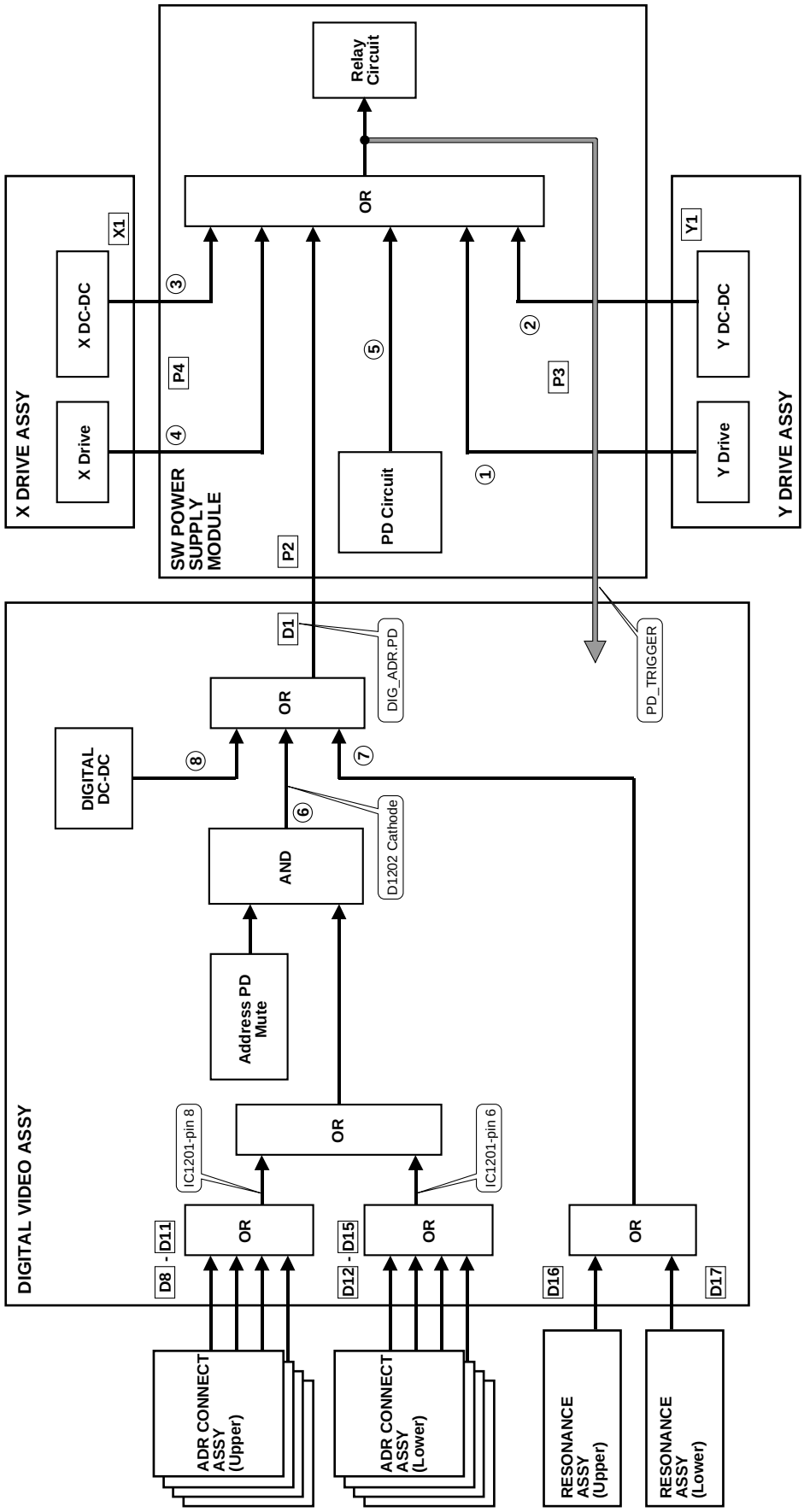
Reference

Shutdown temperature of each temperature sensor
Sensor Temp ≧ 78



	1/13		INPUT1 No SIG
1	CENTER Version		MR MAIN E 2001/09/25 H
2	OSD Version		MR OSD 2001/09/10 A
3	CVIC Version		W2001/09/12 09:00 X2001/09/12 09:07 V2001/09/12 09:10
4	TTXP Version		TTX PRG 061
5	MONITOR Version		F6 91 10
6	PANEL Version		-00
7	FLASH Version		-05
8	MONITOR Model		01
9	Model Select Main		0
10	Model Select AV		4
11	Model Select MONITOR		0
12	Sensore Temp		+28
13	Center Acutime		16 H 41 M
14		RESET	OFF
15	Monitor Acutime		47 H 42 M
16		RESET	OFF
17	Pulse Acutime		164
18		RESET	OFF

● Block Diagram of the Power Down Signal System ("STANDBY/ON" LED: Blinking in red)



Note: The figures ① - ⑧ indicate the number of times the "STANDBY/ON" LED blinks when shutdown occurs in the corresponding route.

● Types and functions of the various protection circuits (P.D. circuits)

Assy Name	Red "STAND-BY/ON" LED Number of Blinks	Type of P.D. Circuits	Function	Remarks
Y DRIVE Assy	1	VCP OCP	P.D. by VCP overcurrent	
	2	VOFS OVP	P.D. by VOFS overvoltage	
		VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
		VH OVP	P.D. by VH overvoltage	
		VH UVP	P.D. by VH undervoltage (= overcurrent)	
		IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	3	VRN OVP	P.D. by VRN overvoltage	
		VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	4	VCP OCP	P.D. by VCP overcurrent	
SW POWER SUPPLY Module	5	VSUS OVP	P.D. by VSUS overvoltage	
		VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
		VADR OVP	P.D. by VADR overvoltage	
		VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
		15V OVP	P.D. by 15V overvoltage	
		15V UVP	P.D. by 15V undervoltage (= overcurrent)	
		12V UVP	P.D. by 12V undervoltage (= overcurrent)	
		6.5V OVP	P.D. by 6.5V overvoltage	
		6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
		13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
		-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
		+B OVP	P.D. by +B overvoltage	
		+B OCP	P.D. by +B overcurrent	
		AC200V P.D.	P.D. by AC200V applied	Note 1
			PFC module overheat protection	
			VSUS arc resistance overheat protection	
ADR CONNECT Assy	6	ADR.PD	P.D. by disconnection of connectors	
RESONANCE Assy	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	8	5.0V OVP	P.D. by 5V overvoltage	
		5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
		3.3V OVP	P.D. by 3.3V overvoltage	
		3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
		2.5V OVP	P.D. by 2.5V overvoltage	
		2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

Reference
OVP : **O**ver **V**oltage **P**rotect
UVP : **U**nder **V**oltage **P**rotect
OCP : **O**ver **C**urrent **P**rotect
PD : **P**ower **D**own

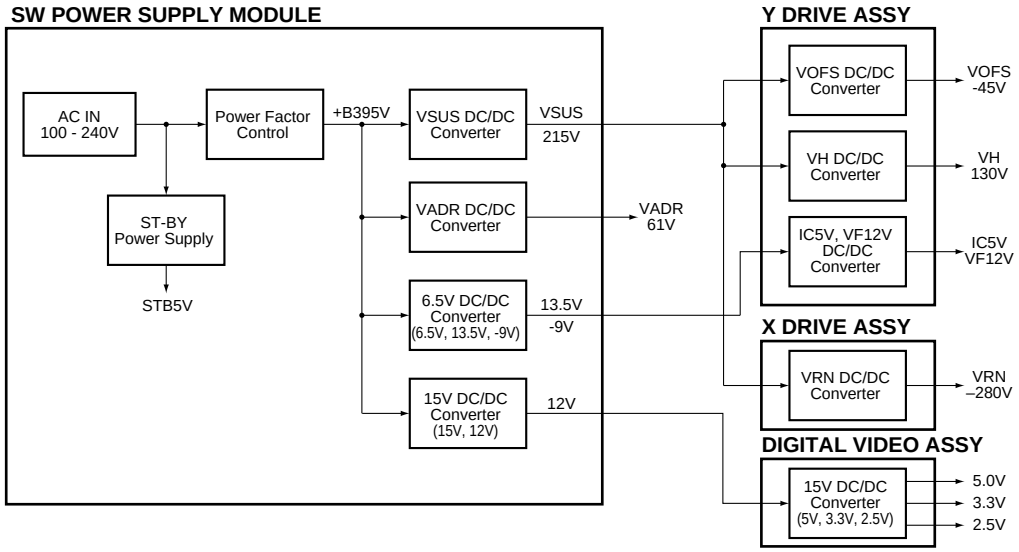
Note 1: The AC200V P.D. circuit is not mounted in the PDP-503PE and PDP-503PU models.

● Diagnosis of error points in the various protection-circuit (P.D. circuits) operations (Red "STANDBY/ON" LED blinks)

Number of Blinks	P.D. Point in Operation	Error Point	Possible Part in failure	Circuit State	P.D. Circuit in Operation	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2213, IC2217, R2209	K2211 Lo	VCP OCP	
2	Y DC DC	VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715	K2709 Lo	VOFS UVP	Drive section (control signals, output elements etc.) in normal operation
			Q2211, Q2212, R2277, IC2208, IC2210			VOFS D/D CONV. BLOCK in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716	K2719 Lo	VH OVP	
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2711, IC2712, IC2716	K2718 Lo	VH UVP	Drive section (control signals, output elements etc.) in normal operation
		SCAN (A), (B) Assy	SCAN IC			VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
		SCAN (A), (B) Assy	SCAN IC	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712	K3708 Lo	VRN OVP	
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712	K3705 Lo	VRN UVP	Drive section (control signals, output elements etc.) in normal operation
		X DRIVE Assy	Q3122			VRN D/D CONV. BLOCK in normal operation
4	X DRIVE	X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3103 Lo	VCP OCP	
5	PS	X DRIVE Assy	IC3200, IC3201 (Pulse module)			In a case where PD does not occur if the P4 connector is disconnected
		Y DRIVE Assy	IC2206, IC2214 (Pulse module)			In a case where PD does not occur if the P3 connector is disconnected
		MX AUDIO Assy	IC8601 (Audio IC)			In a case where PD does not occur if the P6 connector is disconnected
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)				In a case where PD does not occur if Pin 5 of the P2 connector is disconnected
		SW POWER SUPPLY Module	SW POWER SUPPLY Module			In a case where the voltage is not output even if the P4, P3, P6 connectors and Pin 5 of the P2 connectors are disconnected
6	ADR	ADDRESS CONNECT A~D Assy	Disconnection of the D8 - D15 connectors		ADR. PD	
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnection of the D16 and D17 connectors, panel microcomputer is defective, external Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
8	DIGITAL DC DC	D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	
				K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
				K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
				K1906 Lo	2.5V UVP	

Note on PS PD
When the Red "STANDBY/ON" LED blinks five times (power supply PD)
1 When the internal protection circuit of the SW POWER SUPPLY Module worked
2 When a microcomputer was not able to identify the PD point
↓
Care must be taken, because five blinks of the red LED does not always mean that the protection circuit of the SW POWER SUPPLY Module is activated.

● Block diagram of the Power supply section



● Supplementary information

1. Power on/off switch for the large-signal system (SW102)

Function: Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

Usage: Use when only an operational check for the small-signal system is required.

Supplementary information:
When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

How to turn on the power with a command sent via RS-232C communication when the large signal system's power is off

① Check that the unit is in Standby mode.
② Transmit the RS-232C command "DRF."
③ Turn on the power using the remote control unit, side keys, or the command "PON."

Note: Once the power is turned off, the setting of the large signal system power returns to ON.
If you wish to turn on the power when the large signal system's power is off, transmit the DRF command each time.

2. 200V AC power-down switch (SW101)

Function: While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

Setting: For the PU model only, the switch is set to 100V, and for other models, it is set to 200V.

3. Temperature compensation of the VSUS voltage for the drive system

Function: Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

Purpose: To improve the yield by compensating the temperature characteristics of the panel.

Supplementary information:
For this model, temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage, and it is controlled by software.

4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Generally, the whole power-supply module assembly must be replaced.

5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)
For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module.
Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

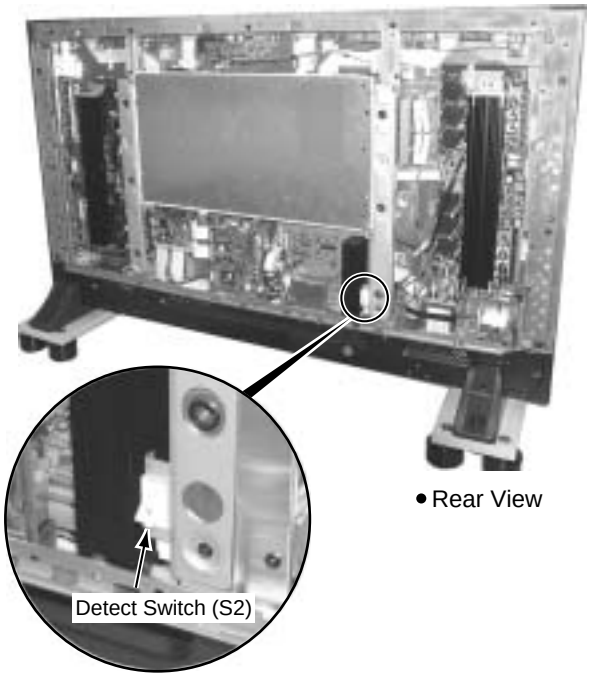
7.1.3 DISASSEMBLY

About detect switch

This unit adopts the "Rear Case opened ! detection" system.
Please work in service as follows by all means.

● Outline and notes

The PDP-433HD-series models use digital signals for video transmission from the Media Receiver to the Plasma Display. To address the need for copyright protection, content protection by HDCP is adopted.
Furthermore, the detection switch is equipped so that the power can never be turned on again if the rear case of the Plasma Display is opened without a specified procedure.
The detection switch does not work when the power is off or when the unit is switched to Standby mode from the remote control unit. Before servicing the Plasma Display, immobilize this switch with an electrical tape or equivalent, then turn on the power. Be sure to remove the tape after the repair is finished.



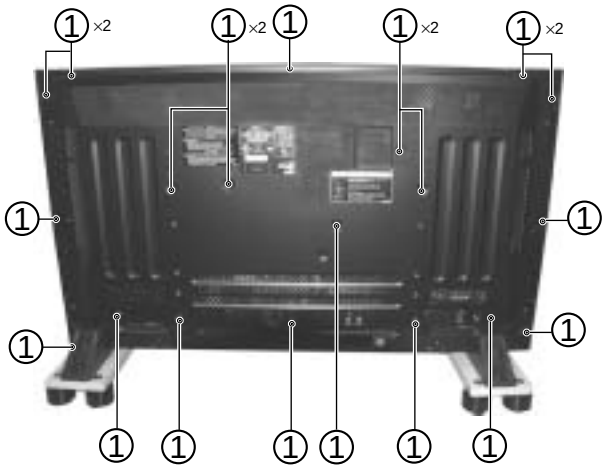
● Rear View

● Should the detection switch be activated

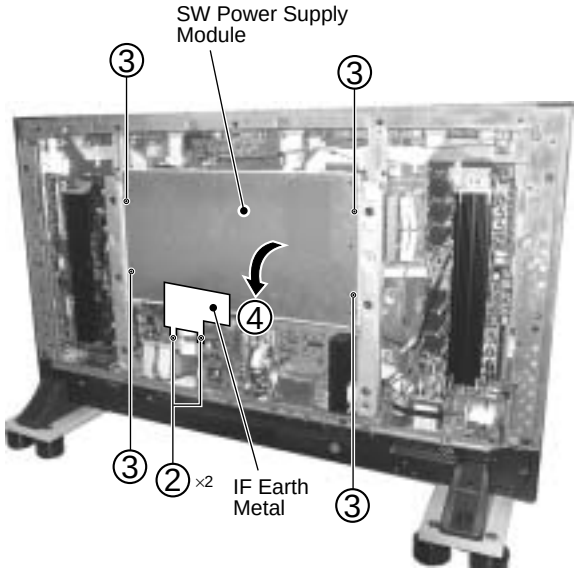
If the detection switch is activated, the red LED continuously blinks at intervals of 300 ms. After closing the rear case or immobilizing the detection switch with an electrical tape or equivalent, press the MENU, ENTER, then POWER keys of the remote control unit in that order. The unit restarts and enters Service Factory mode. Turn off the power using the remote control unit.
Then, the unit can be operated normally.

SW Power Supply Module

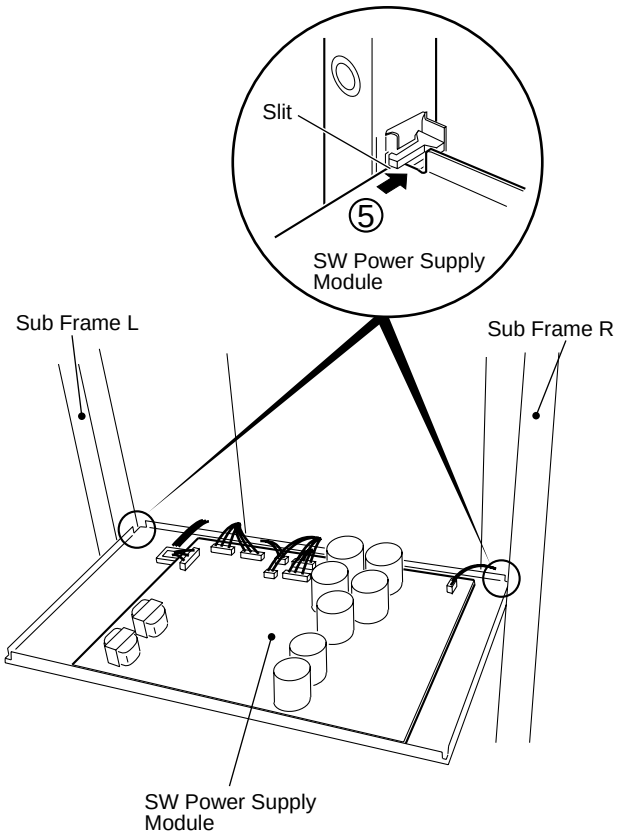
① Remove the Rear Case 43P. (Screws × 19)



② Remove the IF Earth Metal.(Screws × 2)
③ Remove the four screws.
④ Remove the SW Power Supply Module.



⑤ Insert the SW Power Supply Module into the slit of Sub Frame L and R.



Diagnosis

MR INTERFACE, AUDIO AMP SP TERMINAL and DIGITAL VIDEO Assys

① Remove the Rear Case 43P. (Screws × 19)

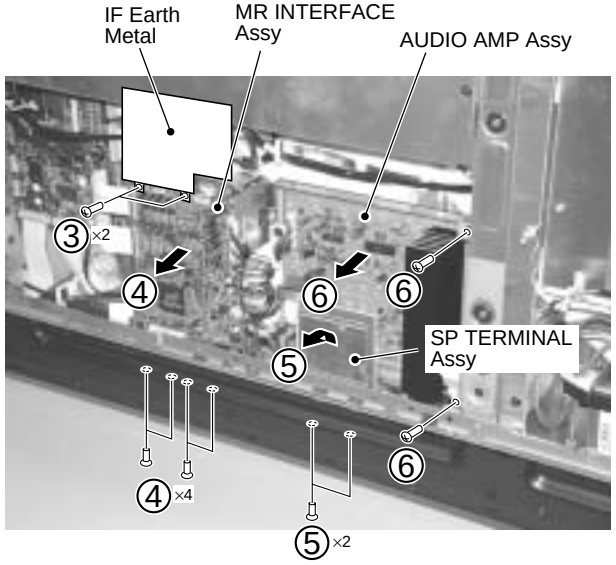
② Remove the SW Power Supply Module. (Connector, Screws × 4)

③ Remove the IF Earth Metal (Screws × 2)

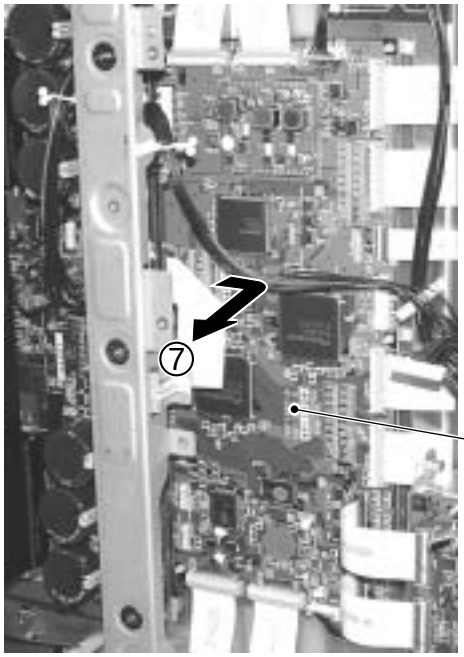
④ Remove the MR INTERFACE Assy (Connector, Screws × 4)

⑤ Remove the SP TERMINAL Assy (Connector, Screws × 2)

⑥ Remove the AUDIO AMP Assy (Connector, Screws × 2)

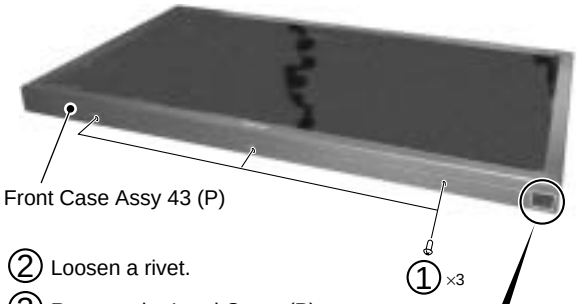


⑦ Remove the DIGITAL VIDEO Assy (Connector,Circuit Board Spacer × 6)



Y DRIVE, SCAN (A), (B) Assy

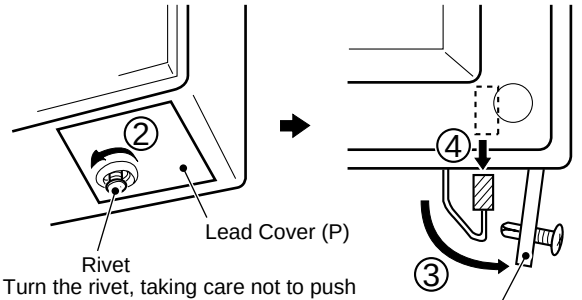
① Remove the three screws.



② Loosen a rivet.

③ Remove the Lead Cover (P).

④ Pull out a Flexible Cable.

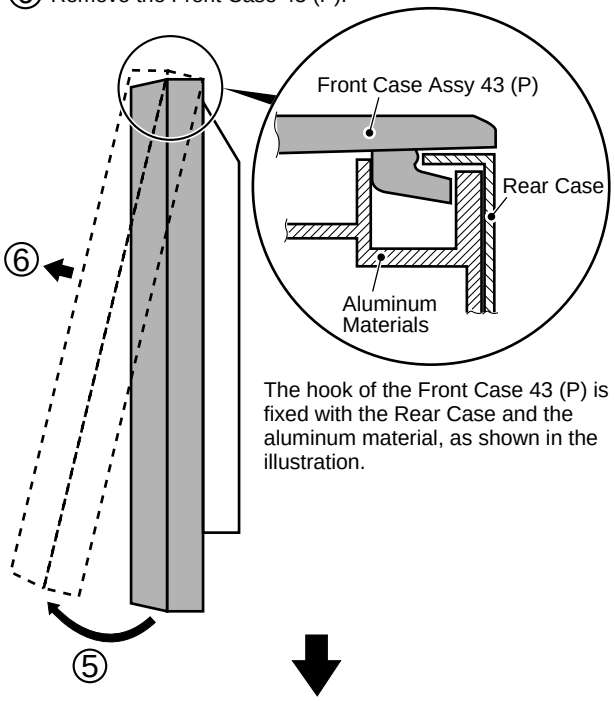


Turn the rivet, taking care not to push on it, because pushing on it may set the rivet to its original position.

Remove the lead cover (P) together with the rivet when the rivet is fully loosened.

⑤ Detach the lower part of the Front Case 43 (P) so that it can swing open hinged at the top.

⑥ Remove the Front Case 43 (P).

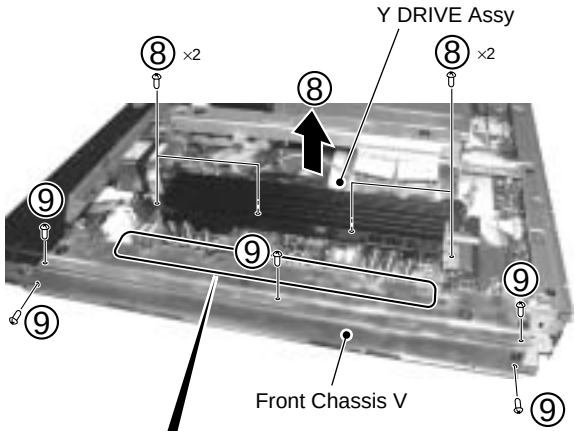


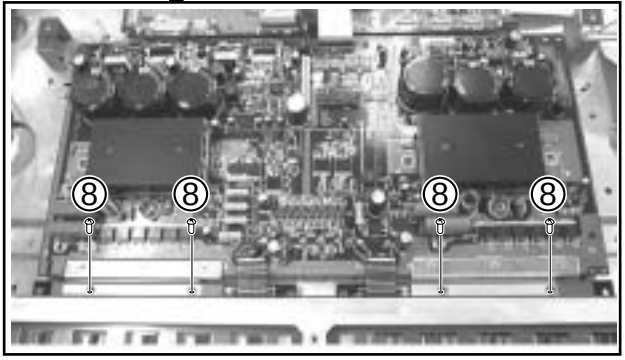
The hook of the Front Case 43 (P) is fixed with the Rear Case and the aluminum material, as shown in the illustration.

⑦ Remove the Rear Case 43P. (Screws × 19)

⑧ Remove the Y DRIVE Assy.
(Connector, PCB Spacer × 3, Screws × 8)

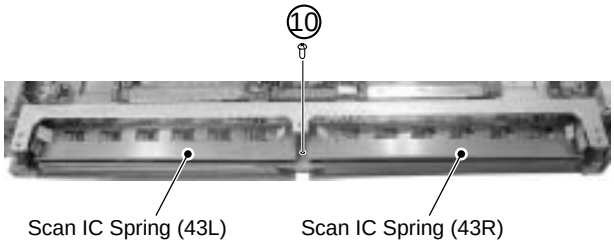
⑨ Remove the Front Chassis V. (Screws × 5)





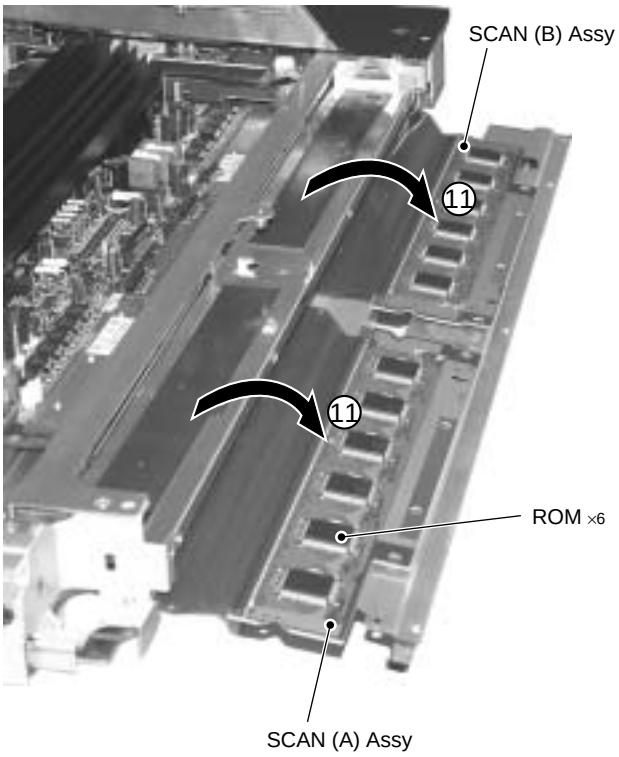
X DRIVE Assy

⑩ Remove the Scan IC Spring (43L) and (43R).
(Screws × 1)



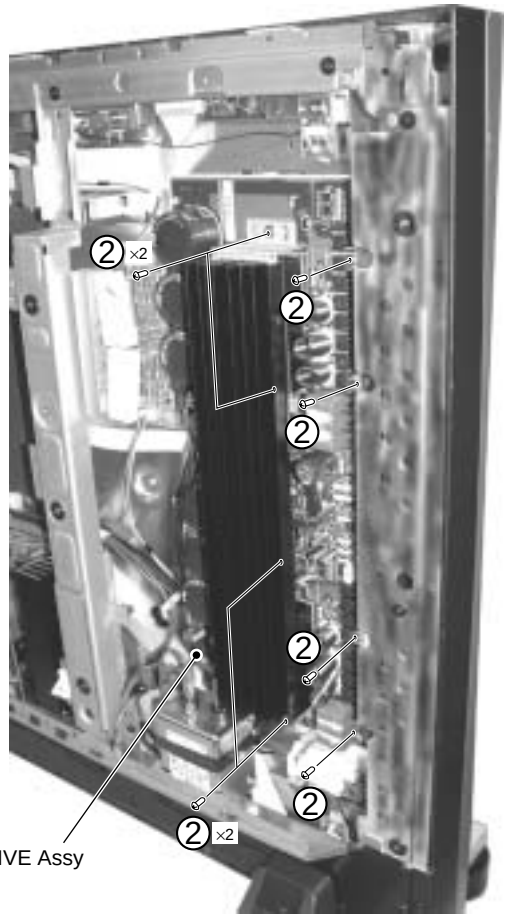
⑪ Reverse the SCAN (A) and SCAN (B) Assemblies.

⑫ Exchange the ROM if necessary.



① Remove the Rear Case 43P. (Screws × 19)

② Remove the X DRIVE Assy.
(Connector, PCB Spacer × 3, Screws × 8)



7.2 IC INFORMATION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

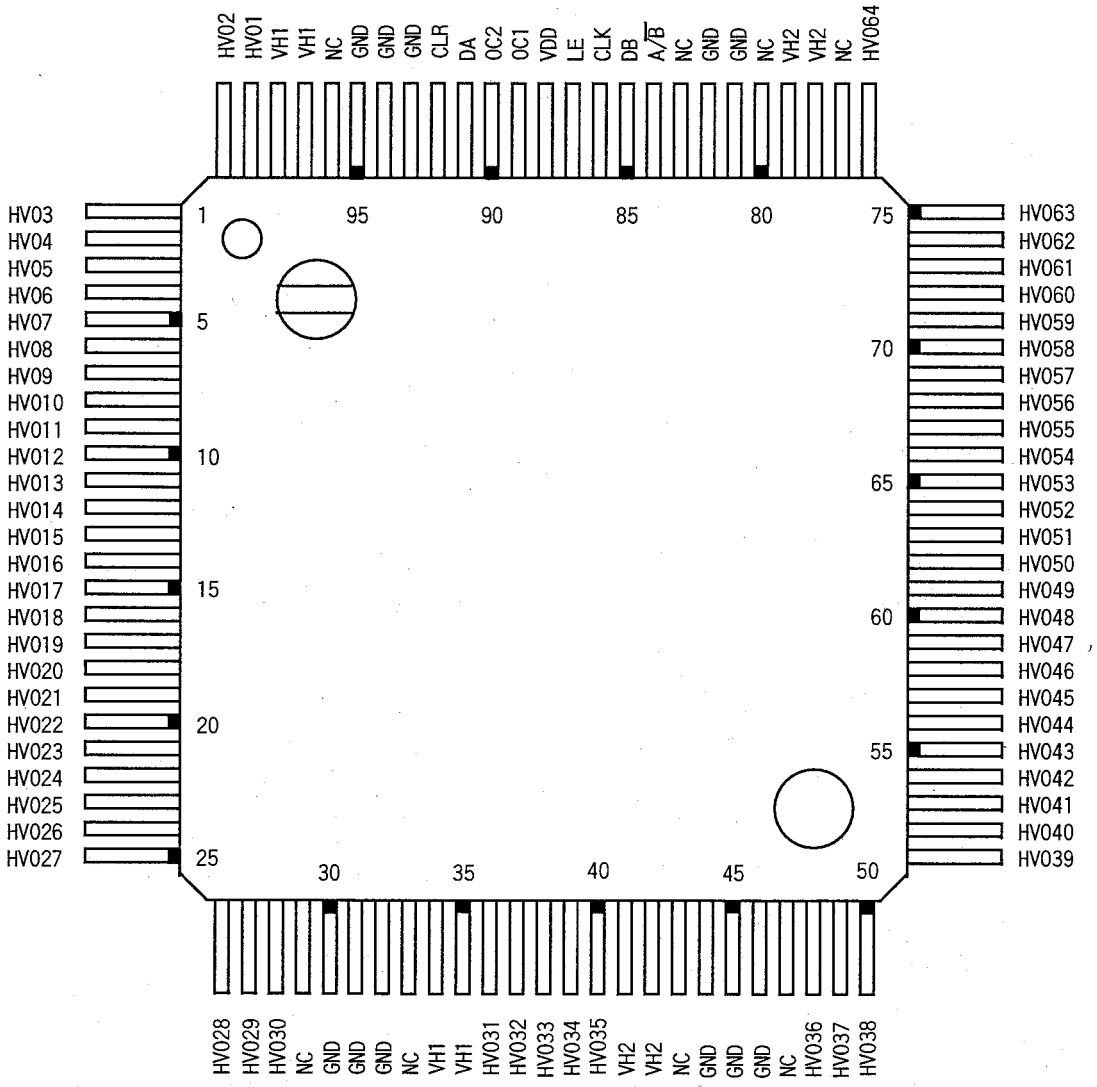
• List of IC

SN755864APZP, HD64F2328VF, PE1013B, M30624FGAFP, PD6358A, PST9246N, FS781BZB, STK795-470

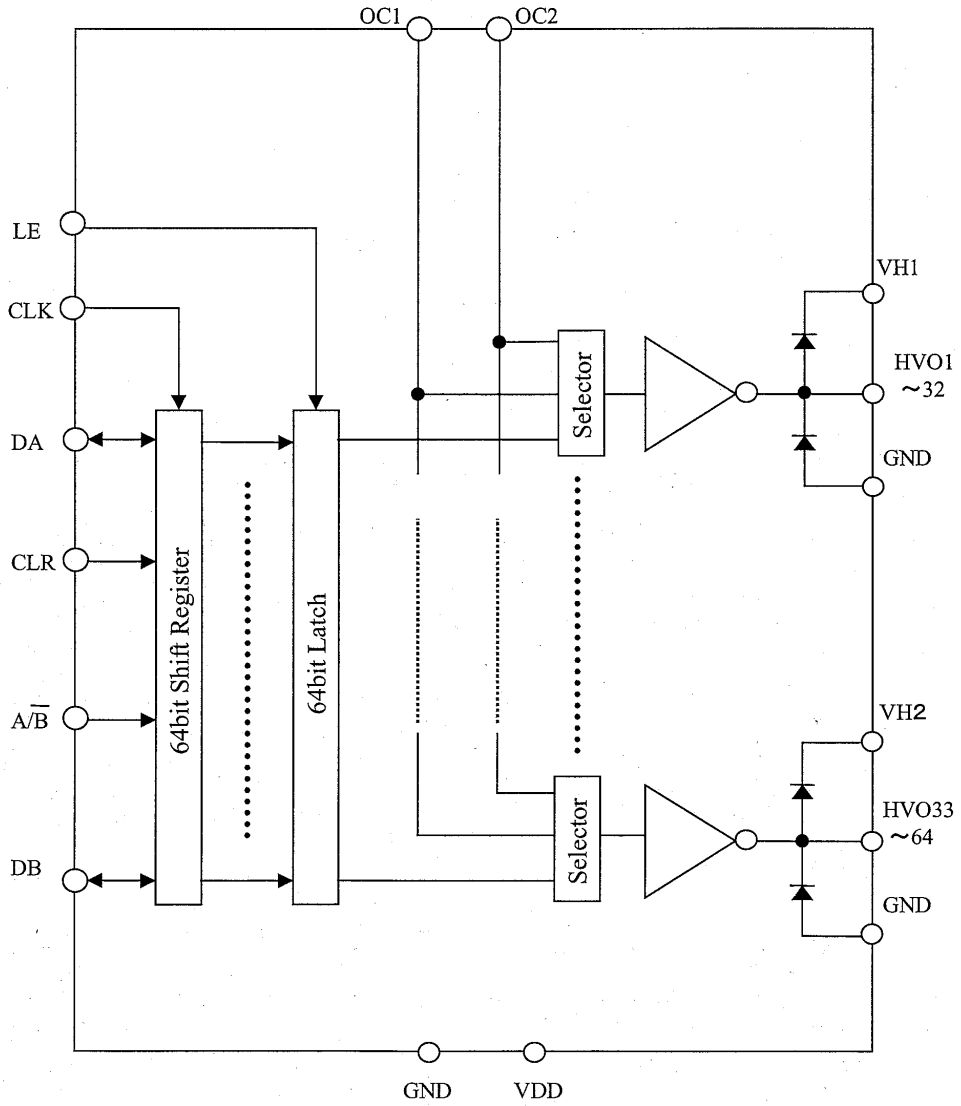
■ SN755864APZP (SCAN A ASSY : IC6201 - IC6206, SCAN B ASSY : IC6001 - IC6006)

Scan IC

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

Name	Pin No.	I/O	Num.	Function
CLK	86	I	1	Shift clock (start edge partial response)
DA	91	I/O	1	The serial data input of shifting register
DB	85	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "H" level
CLR	92	I	1	It do data of shift register with "H" by "L" level
A/$\overline{B}$	84	I	1	A shift directional control signal of shift register
OC1	89	I	1	An output control terminal of HVO
OC2	90	I	1	An output control terminal of HVO
HVO	99, 100, 1-28 36-40, 48-76	O	64	High voltage drive output (HVO1 - HVO64)
VDD	88	–	1	Logic power supply
GND	30-32, 44-46 81-82, 93, 94-95	–	11	Standard potential. This is common to HVO1 - HVO64.
VH1	34, 35, 97, 98	–	4	The high potential circuit power supply which is common to HVO1 - HVO32
VH2	41, 42, 78, 79	–	4	The high potential circuit power supply which is common to HVO33 - HVO64
NC	29, 33, 43, 47 77, 80, 83, 96	–	8	It is the insulation electrically

■ HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)

Panel Microcomputer

● Pin Function (1/3)

No.	Pin Name	Function
1	CS_23	PE5064 (IC1703) control output
2	NC	NC Terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	GND
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables / for panel microcomputer
34	CE_PN	Enables / for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input
38	VD_31	The V signal input from IC1401 (PD6358)
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

● Pin Function (2/3)

No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC1207 (module microcomputer)
60	EXT_TXD	Communication with the outside (program notes)
61	D_RXD	Communication with IC1207 (module microcomputer)
62	EXT_RXD	Communication with the outside (program notes)
63	D_CLK	Communication with IC1207 (module microcomputer)
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused)
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer
75	SEL23B	IC1703 (PE5064) control terminal
76	CLRB	IC1703 (PE5064) control terminal
77	FR_SEL	The free run select signal output
78	RST31B	The reset output to IC1301, IC1401 (PD6358)
79	RST23B	The reset output to IC1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unused)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

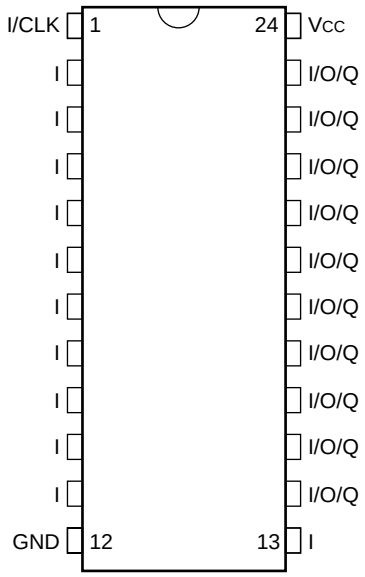
● Pin Function (3/3)

No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block
109	ADR_K_EMG_U1	The emergency input from panel upper address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper address resonance block (unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal input
116	MUTE_SUS	The X and Y drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside Assy (RGB Assy etc.)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The HD signal input from outside Assy (RGB Assy etc.)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401 (PD6358) control signal
128	CS_31X	IC1301, IC1401 (PD6358) control signal

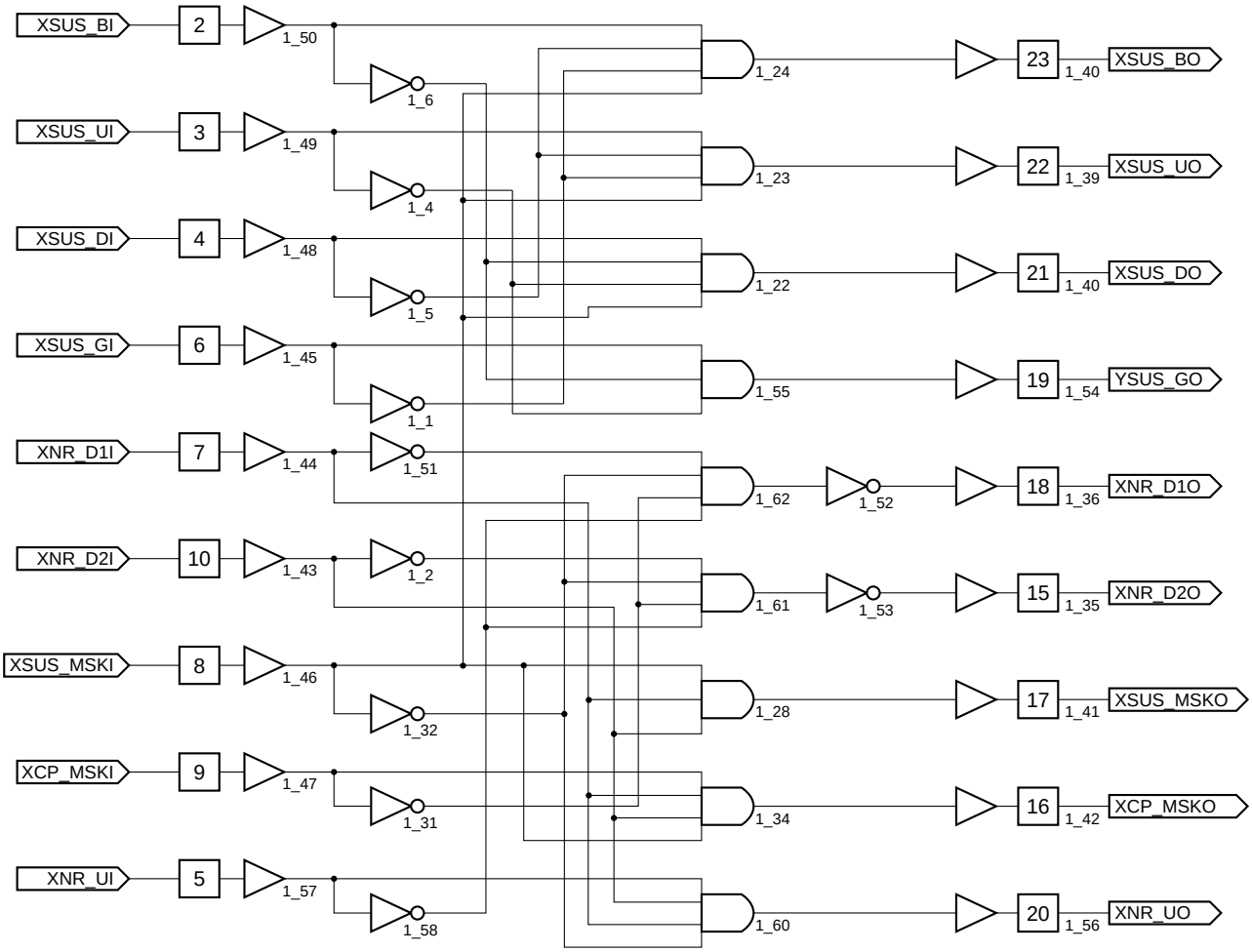
PE1012A (X DRIVEASSY : IC3003)

Drive Protect PLD

● Pin Assignment (Top View)



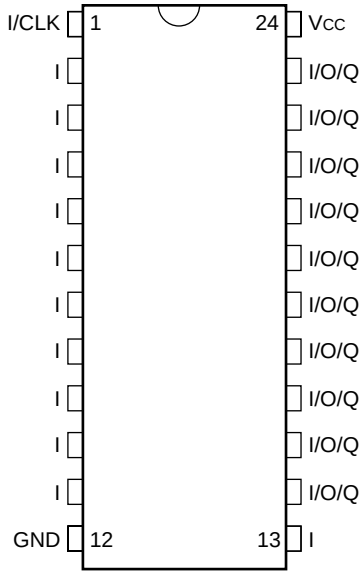
● Block Diagram



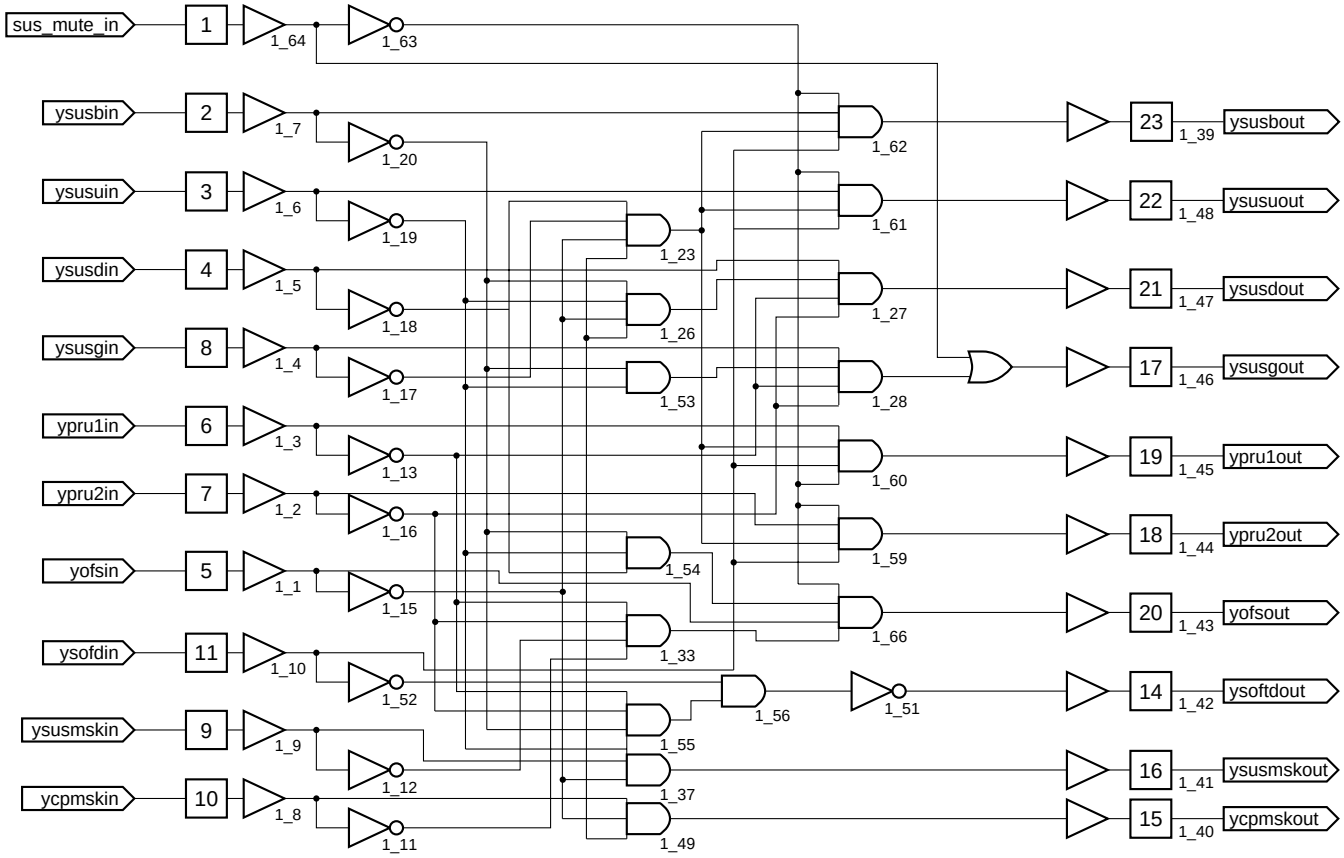
■ PE1013B (Y DRIVEASSY : IC2006)

Drive Protect PLD

● Pin Assignment (Top View)



● Block Diagram



■ M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)

Module Microcomputer

● Pin Function (1/2)

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down
10	XCIN	NC terminal
11	XCOUT	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

● Pin Function (2/2)

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SII861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

■ PD6358A (DIGITAL VIDEO ASSY : IC1301, IC1401)

Picture Improved IC

● Pin Function (1/7)

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

● Pin Function (2/7)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

● Pin Function (3/7)

No.	Pin Name	Function
101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCLKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)

● Pin Function (4/7)

No.	Pin Name	Function
151	ADRCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

● Pin Function (5/7)

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

● Pin Function (6/7)

No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

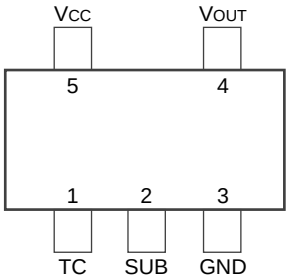
● Pin Function (7/7)

No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

■ PST9246N (DIGITAL VIDEO ASSY: IC1208)

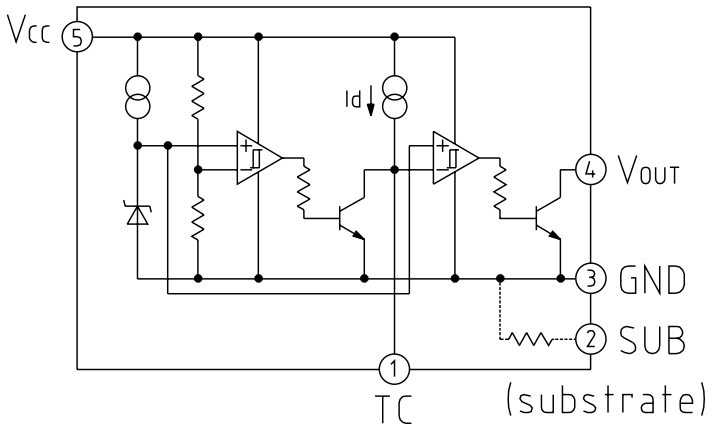
Drive Protect PLD

● Pin Assignment (Top View)



SOT-25
(TOP VIEW)

● Block Diagram



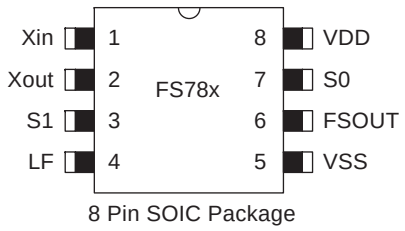
● Pin Function

Pin No.	Pin name	Functions
1	TC	TPLH control pin
2	SUB	Substate pin
3	GND	GND pin
4	VOUT	Reset signal output pin
5	VCC	VCC pin / voltage detect pin

FS781BZB (DIGITAL VIDEO ASSY: IC1802)

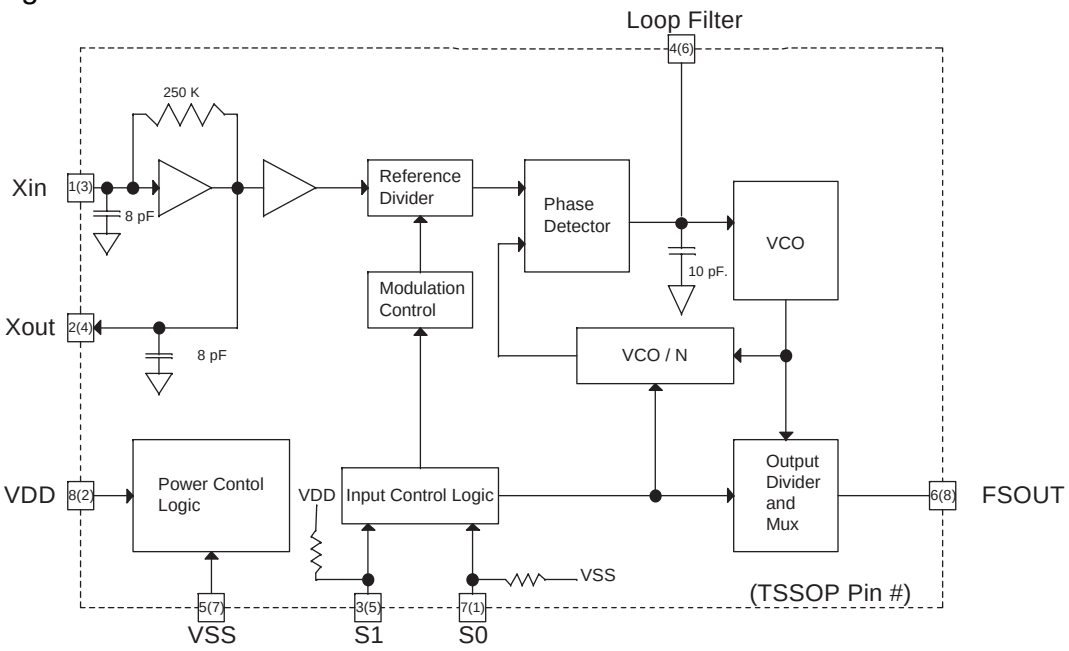
Low EMI Clock IC

Pin Assignment (Top View)



8 Pin SOIC Package

Block Diagram



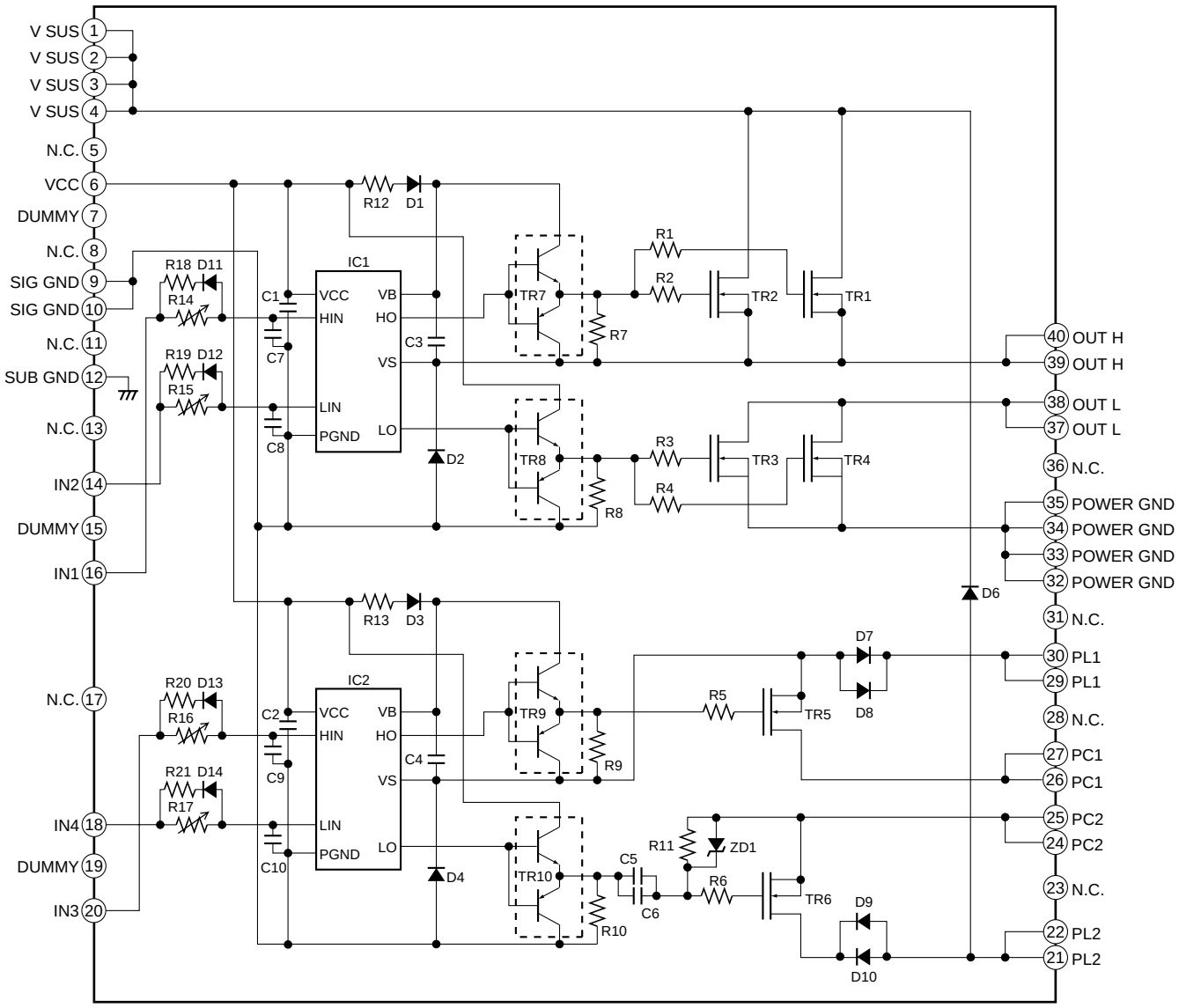
Pin Function

No.	Pin Name	I/O	Type	Function
1/2	Xin/Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin2) unconnected.
7/3	S0/S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 and 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multipled by 2X and 4X for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply
5	VSS	P	Power	Power Supply Ground

■ STK795-470 (X DRIVE ASSY : IC3200, IC3201, Y DRIVE ASSY : IC2206, IC2214)

PDP Pulse Module IC

● Block Diagram



8. PANEL FACILITIES

Plasma Display